



Microsoft® Operating System/2 Desktop Reference



Version 1.1

Microsoft Corporation

Information in this document is subject to change without notice and does not represent a commitment on the part of Microsoft Corporation. The software and/or databases described in this document are furnished under a license agreement or nondisclosure agreement. The software and/or databases may be used or copied only in accordance with the terms of the agreement. The purchaser may make one copy of the software for backup purposes. No part of this manual and/or database may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or information storage and retrieval systems, for any purpose other than the purchaser's personal use, without the written permission of Microsoft Corporation.

© Copyright Microsoft Corporation, 1989. All rights reserved.
Simultaneously published in the United States and Canada.

Printed in the United States of America.

The character-set tables and keyboard layouts in the appendix to this manual are reprinted by permission from the *IBM Operating System/2 User's Reference*, © 1987 by International Business Machines Corporation.

Microsoft®, MS®, MS-DOS®, the Microsoft logo, and InPort® are registered trademarks of Microsoft Corporation.

IBM®, Personal System/2®, and Quietwriter® are registered trademarks and PC/AT™ is a trademark of International Business Machines Corporation.

HP Computer Museum

www.hpmuseum.net

For research and education purposes only.

Welcome

This reference describes, in alphabetical order, the commands, utilities, applications, and other programs you can use with Microsoft® Operating System/2. The entries include the following:

- Presentation Manager applications and commands
- MS® OS/2 commands and utilities
- DOS commands and utilities
- Batch commands
- Configuration commands
- MS OS/2 device drivers
- System Editor commands

This manual is intended to be a reference for experienced users. For additional information about MS OS/2 and the Presentation Manager environment, see the following manuals:

- To learn how to install MS OS/2 and quickly get started with Presentation Manager and MS OS/2, see *Microsoft Operating System/2 Getting Started*.
- For a comprehensive description of the Presentation Manager environment, the MS OS/2 and DOS command interpreters, batch programs, configuration commands, and device drivers, see the *Microsoft Operating System/2 User's Guide*.

Commands and Utilities

The following section lists MS OS/2 commands and utilities by type. Included are Presentation Manager commands grouped by application and menu, MS OS/2 commands and utilities, DOS commands and utilities, batch commands, and configuration commands.

Commands

A command is any word or phrase that you can choose from a menu or type at a prompt in order to carry out an action. MS OS/2 commands are built into programs: the menu commands are part of Presentation Manager; the command-line commands are part of the MS OS/2 command interpreter (**cmd**) or the DOS command interpreter (**command**).

The command-line commands include special sets of commands for configuring your system and for running batch files.

Presentation Manager Commands

Control Panel

Preferences Menu

Screen Colors
Border Width
Warning Beep
Mouse
Logo Display
Country

Installation Menu

Add Font
Delete Font
Add Printer Driver
Delete Printer Driver
Add Queue Processor
Delete Queue Processor

Setup Menu

Communications Port
Printer Defaults
Printer Connections
Spooler Options
Spooler Queues
Queue Connections

Exit Menu

Exit Control Panel
Resume

File System**File Menu**

Open
Print
Associate
Move
Copy
Delete
Rename
Change Attributes
Create Directory
Select All
Deselect All
Undo Selection

Options Menu

Display Options
Full File Details
File Options
Minimize On Run

Tree Menu

Show Outline Tree
Expand One Level
Expand Branch
Expand All
Collapse Branch

Arrange Menu

Cascade
Tile

Window Menu

Refresh
Close All Directories
Directory Tree

Exit Menu

Exit File System
Resume

Spooler Queue Manager**Queue Menu**

Hold Queue
Release Queue
Hold All Jobs
Release All Jobs
Cancel All Jobs

Special Menu

Refresh
Auto Refresh

Job Menu

Job Details
Cancel Job
Print Job Next
Repeat Job
Start Job Again
Hold Job
Release Job

Start Programs

Program Menu

Start
Add
Change
Delete
Copy
Minimize On Run

Group Menu

Add
Delete
Rename
Main Group
Utility Programs
Demonstration Programs

Task Manager

Task Menu

Switch To
Close
Minimize After Use

Shutdown Menu

Shutdown Now
Resume Task Manager

Arrange Menu

Cascade
Tile

System Menu

The following commands appear in various combinations on the System menus of MS OS/2 applications that run in a window. The first five commands always appear, although some of them may be inactive:

Restore
Move
Size
Minimize
Maximize

These additional commands appear on the System menus of some applications:

Close
Help
Large Font
Next Window
Scroll
Small Font
Task Manager

MS OS/2 Commands

chcp	path
chdir	prompt
cls	rename
copy	rmdir
date	set
del	start
detach	time
dir	type
dpath	ver
exit	verify
mkdir	vol

DOS Commands

break	path
chcp	prompt
chdir	rename
cls	rmdir
copy	set
date	time
del	type
dir	ver
exit	verify
mkdir	vol

Batch Commands

call	if
echo	pause
endlocal (OS/2 only)	rem
extproc (OS/2 only)	setlocal (OS/2 only)
for	shift
goto	

Configuration Commands

break (DOS only)	priority
buffers	protectonly (OS/2 only)
codepage	protshell (OS/2 only)
country	rem
device	rmsize (DOS only)
devinfo	run
diskcache	set
fcbs (DOS only)	shell (DOS only)
iopl (OS/2 only)	swappath
libpath	threads
maxwait	timeslice
memman	trace
pauseonerror	tracebuf

Utilities

A utility is a program that is included as part of MS OS/2 but is separate from the MS OS/2 and DOS command interpreters. You start a utility by typing its name.

MS OS/2 Utilities

ansi	label
attrib	mode
backup	more
chkdsk	patch
cmd	print
comp	recover
createdd	replace
ddinstal	restore
diskcomp	sort
diskcopy	spool
e (System Editor)	trace
fdisk	tracefmt
find	tree
format	unpack
help	xcopy
keyb	

DOS Utilities

append	label
assign	mode
attrib	more
backup	patch
chkdsk	print
command	recover
comp	replace
diskcomp	restore
diskcopy	setcom40
edlin	sort
find	subst
format	tree
graftabl	unpack
help	xcopy
join	

Device Drivers

A device driver tells MS OS/2 how to handle a device that is installed on your system. This manual contains descriptions of the following drivers, which are included on your MS OS/2 Installation disk:

ANSI.SYS
COM0x.SYS
EXTDSKDD.SYS
MOUSExx.SYS
POINTDD.SYS
VDISK.SYS

Notational Conventions

To help you locate and interpret information easily, this manual uses icons, a standard syntax format and terminology, and specific typographic conventions. The following sections describe these elements.

Icons

The following icons appear in the left margin and indicate where the command or utility described in the adjacent text can be used.



Control Panel



File System



Spooler Queue Manager



Start Programs



Task Manager



System menu



MS OS/2 utility



MS OS/2 command



DOS utility



DOS command



Configuration command

Syntax

Syntax represents the order in which you must type a command-line command or utility and any arguments and options that follow it. Elements that appear in bold type must be typed exactly as they appear in the syntax line; items that appear in *italic* are placeholders that represent specific information that you will need to supply. Unless specified otherwise, you may type commands, arguments, and options in either uppercase or lowercase letters.

The following is a sample syntax line:

The diagram shows a sample syntax line: `sample [+r|-r] [drive:][path]filename [...] [options]`. Numbered callouts point to the following elements:

- 1: `sample`
- 2: `[]`
- 3: `|`
- 4: `drive:`
- 5: `path`
- 6: `filename`
- 7: `[]`
- 8: `[options]`

The meaning of each of these elements is as follows:

Number	Element	Meaning
1	sample	Specifies the name of the command or utility.
2	<code>[]</code>	Indicates items that are optional. To include the optional information described within the brackets, type only the information, not the brackets themselves.
3	<code>|</code>	Separates two mutually exclusive choices in a syntax line; for example: break [on| off] Type only one of these choices (that is, break on or break off); do not type the pipe symbol itself.
4	<i>drive:</i>	Specifies a drive. You need to specify a drive with a filename only if you are using a file that is <i>not</i> on the current drive.
5	<i>path</i>	Specifies a complete directory path, using the following syntax: <code>[\directory][\directory...]\directory</code> You need to specify a path with a filename only if the file is not in the current directory.

6	<i>filename</i>	Specifies a file and includes any filename extension. The <i>filename</i> argument cannot be a device name or drive letter.
7	...	Indicates that an argument can be repeated several times in a command line. Type only the information, not the ellipsis (...) itself.
8	<i>options</i>	Specifies one or more command options. An option begins with a slash; for example, /p.

Other placeholders used in syntax lines in this manual include the following:

Placeholder	Meaning
<i>source</i>	Specifies the drive, directory, file, or device that will be transferred to a specified destination or used as input to a command.
<i>destination</i>	Specifies the drive, directory, file, or device that <i>source</i> will be transferred to.
<i>string</i>	Specifies a group of characters to be treated as a unit. A string can include letters, numbers, spaces, or any other characters and is usually enclosed in double quotation marks. Some commands, such as find , work with strings of text.

Typographic Conventions

The following typographic conventions are used in this reference:

Convention	Use
bold	Command-line commands, utilities, options, and portions of syntax that must be typed exactly as shown.
<i>italic</i>	Variables and placeholders that represent information you must provide.
monospace	Sample command lines, program code, program output, and examples.
ALL CAPITALS	Filenames, directory names, and acronyms.
SMALL CAPITALS	Names of keys on your keyboard.

Key combinations and key sequences appear in the following formats:

Notation	Meaning
KEY+KEY	A plus sign (+) between keynames means you must press the keys at the same time; for example, “Press ALT+ESC” means that you press the ALT key and hold it down while you press and release the ESC key.
KEY, KEY	A comma (,) between keynames means you must press the keys in sequence; for example, “Press ALT, SPACEBAR” means that you press the ALT key and release it, and then you press the SPACEBAR and release it.
DIRECTION keys	Arrow keys on your computer keypad are called DIRECTION keys. The individual names refer to the direction the arrow on the key points: UP, DOWN, RIGHT, and LEFT.



Add



Adds a new, empty group to Start Programs.

When you choose this command from the Group menu, a dialog box appears, asking you for the name of the new group. The group name can be up to 60 characters and can include letters, numbers, spaces, and any symbols except the backslash (\). Once you have added a new group, you can use either the Copy command or the Add command from the Program menu to add programs to the group.



Adds a program to the current group in Start Programs.

When you choose this command from the Program menu, a dialog box appears, containing text boxes in which you can type the following information:

- A title for the program. This title is added to the current group in Start Programs. You can use any title you like for the program; it does not have to be the program's usual name, and it does not have to have anything to do with the name of the file that contains the program. The title can be up to 60 characters and can include letters, numbers, spaces, and any symbols except the backslash (\). You can use a given title only once in a single group, but you can use the same title in more than one group. You can also add the same program to a group more than once, as long as you use different titles.
- The program's path and full filename. If you specify only the filename, MS OS/2 first searches the directory from which you started OS/2 and then searches the directories specified by the PATH environment variable.
- Arguments to the program. For example, if you want the **format** utility to format the disk in drive A, specify **a:** as an argument. If you want the program to prompt you for arguments each time it is run, place a question mark (?) in this text box.
- The current directory. The default is the root directory of the current drive.

Add Font



Adds a new font to your system.

Fonts are used by your printer or by an application to create different typefaces for your documents or on your screen. These fonts are contained in font files, each of which may contain several fonts (for example, the `TIMES.FON` font file contains fonts for Times Roman, Times Roman Bold, and Times Roman Italic, among others).

When you choose this command, a dialog box appears, asking you to insert the disk that contains the font file you want to add. The dialog box also contains a text box in which you can type the drive letter and path of the directory where the font file is located. (Don't type the font-file name, just the drive and path.) When you choose the Enter button in this dialog box, another dialog box appears, listing the font files in the directory you've specified; you can then choose the font files you want to add from that list.

Add Printer Driver



Adds a printer driver to your system.

When you choose this command, a dialog box appears, asking you to insert the disk that contains the printer-driver file you want to add. The dialog box also contains a text box in which you can type the drive and path of the directory where the printer-driver file is located. (Don't type the name of the file, just the drive and path.) When you choose the Enter button in this dialog box, another dialog box appears, listing the printer-driver files in the directory you've specified; you can then choose the printer drivers you want to add from that list.

Add Queue Processor



Adds a queue processor to your system.

When you choose this command, a dialog box appears, asking you to insert the disk that contains the queue-processor file you want to add. The dialog box also contains a text box in which you can type the drive letter and path of the directory where the queue-processor file is

located. (Don't type the name of the file, just the drive and path.) When you choose the Enter button in this dialog box, another dialog box appears, listing the queue-processor files in the directory you've specified; you can then choose the queue processors you want to add from that list.

Ansi



ansi [**on** | **off**]

Turns the support on or off for ANSI escape sequences. The default is **on**.

If you type **ansi** by itself, the utility displays the current setting.

ANSI.SYS



device=[drive:][path]ansi.sys

Directs MS OS/2 to load the ANSI.SYS device driver. To use this command, place it in your CONFIG.SYS file.

When this driver is loaded, you can use ANSI escape sequences in a DOS session to move the cursor, set the color for characters, and set the number of character rows and columns for the screen.

ANSI escape sequences are the default in a full-screen OS/2 session.

For a list of the escape sequences used in the ANSI.SYS device driver, see the *Microsoft Operating System/2 User's Guide*.

Append

DOS**append** [/e | ; | [drive:]path[;...]]

Tells an application which directories besides the current directory it should search for data files.

- /e** Stores the appended paths in the environment. You should use **/e** by itself, without any drive or path. MS OS/2 accepts this option only the first time you use **append** after starting MS OS/2. If you use the **/e** option a second time, you receive an error message.
- ;** When used by itself (**append ;**), deletes the existing appended path. You also use semicolons to separate multiple paths.

drive:path

Specifies the directory path an application searches for data files. You can specify more than one path, separating them with semicolons.

Each time you use **append**, the new path you specify takes the place of the previous path. If you use the **/e** option the first time you use **append**, each new path will be stored in the MS OS/2 environment.

If you type **append** by itself, the utility displays the current data path.

The **append** utility achieves the same results in the DOS session as the **dpath** command does in a full-screen OS/2 session.

Example To tell an application to search the REPORTS and NOTES subdirectories of the DATA directory on the current drive, and the REPORTS directory on drive B, type the following:

```
append \data\reports;\data\notes;b:\reports
```

Assign

DOS**assign** [drive1=drive2] [...]

Assigns the drive letter of one drive to a different drive, so that if you request the first drive you get the second.

drive1

Specifies the drive letter you want to reassign.

drive2

Specifies the drive letter you want to substitute for *drive1*.

Do not type a colon (:) after the drive letters.

You can make more than one drive assignment in a single command line.

If you type **assign** by itself, the utility resets all drive letters to their original drives.

Do not use **assign** unless you need to. You can easily forget that you've reassigned a drive letter and end up changing files on an unexpected drive. Also, many programs (for example, the **backup** and **restore** utilities) require information about a drive's characteristics in order to work properly. If you have reassigned drive letters, these may not work as you expected.

Example Suppose you want to run an application on your hard disk (drive C) and the application requires you to put your program disk in drive A and your data disk in drive B. To send all references to drives A and B to drive C, type the following:

```
assign a=c b=c
```



Associate



Associates a filename extension with a program or removes an existing association. When a filename extension is associated with a program, choosing a filename that has that extension both starts the program and opens the file as a data file for the program.

When you choose this command, a dialog box appears. If you have selected a filename, the dialog box contains a list of programs associated with the filename's extension. If you have selected a program, the dialog box contains a list of the filename extensions associated with the program. You can add or delete programs or filename extensions by selecting them and then choosing the Add or Delete button.

Example If you associate the filename extension .DOC with the Microsoft Word program and you choose the filename LETTER.DOC, Word starts and the LETTER.DOC file is opened as a Word file.

Attrib (Attributes)



attrib [+r | -r] [+a | -a] [drive:][path]filename [/s]

Changes or displays the attributes of the file you specify. The attributes determine whether the file is read-only and whether it is affected when you use the **backup**, **restore**, and **xcopy** utilities. For more information, see the individual utility descriptions.

- +r** Makes the file read-only.
- r** Allows the file to be changed or deleted.
- +a** Sets the archive flag of the file.
- a** Clears the archive flag of the file.

filename

Specifies the file for which you want to change the attributes. You can use wildcard characters to affect more than one file.

- /s** Changes the attributes of all files named *filename* in subdirectories as well as in directories.

To see the attributes of a particular file, type only **attrib** and the filename. If the letter **A** appears in the listing, the archive attribute is set for the file; if **R** appears in the listing, the read-only attribute is set.



Works the same way in the DOS session as described above.

Example To make all the files read-only in the directory \SCHEDULE\MEETINGS on drive C, and in all its subdirectories, type the following:

```
attrib +r c:\schedule\meetings\*.* /s
```

Auto Refresh



Tells the Spooler Queue Manager to update the list of queues and jobs automatically every time the list changes.

To turn Auto Refresh on, choose the command; a check mark appears next to it. To turn Auto Refresh off, choose the command again; the check mark is removed.

Backup



backup *drive1:[path][filename]* *drive2: [/s] [/m] [/a] [/f]*
[/d:date [/t:time]] [/l:[path]logname]

Makes backup copies of files from one disk and stores them on another. You can then use the **restore** command to copy these files back to their original location.

drive1:

Specifies the drive that contains the files you want to make backups of.

filename

Specifies a single file you want to make a backup of. You can use wildcard characters to make backups of a group of files with similar names.

drive2:

Specifies the drive that contains the disk where you want to store the backup files. The files are placed in the root directory of this drive.

- /s** Makes backup copies of the contents of all the subdirectories.
- /m** Makes backup copies of only the files that have been changed since the last backup operation and turns off the archive bit of the original file.
- /a** Adds the backup files being created to the backup files on the destination disk without deleting the files that are already there. This option will not work if any of the files were previously backed up using the **backup** utility from MS-DOS® version 3.21 or earlier.
- /f** Formats the destination disk if it is unformatted. This option does not format a nonremovable disk, nor does it format a disk that is already formatted.

/d:date

Makes backup copies of only the files that were changed on or after the date specified.

/t:time

Makes backup copies of only the files that were changed at or after the time specified. Do not use this option without the **/d:date** option.

/l:logname

Creates a log file in the root directory of the start-up disk and puts a log of the backup operation in that file. You can specify a different directory for the log file. If you do not specify a filename, **backup** names the file BACKUP.LOG.

The backup files are stored in the BACKUP.*nnn* and CONTROL.*nnn* files; *nnn* is the number of the disk (starting from 001). As each disk is filled, **backup** prompts you for the next disk.

The source and destination disks do not have to be the same type; you can back up files from a hard disk to a floppy disk, or from one kind of floppy disk to another. If you don't specify the **/a** option, **backup** erases all the files that are already on the destination disk.

DOS

Works the same way in the DOS session as described above.

Do not try to make backups of files located on a drive that you have assigned, joined, or substituted by using the **assign**, **join**, or **subst** utility. If you do, you may not be able to restore the files by using the **restore** utility.

Example If you want to make backup copies of all the files in the \FILM\CRITIQUE directory on drive C and store them on an unformatted disk in drive A, type the following:

```
backup c:\film\critique a: /f
```

Border Width



Changes the width of the window borders on your screen.

When you choose this command, a dialog box appears, containing a text box in which you can type a value for the border width. The value can be any number in the range 1 to 50; the default is 4.

Break

DOS

command

break [on | off]

Tells MS OS/2 when to check for the key combination CTRL+C (or CTRL+BREAK) in the DOS session and to stop the program or batch file that is running when it encounters the combination.

Depending on the program you are running, you may press CTRL+C in the DOS session to stop an activity (for example, to stop sorting a file). Ordinarily, MS OS/2 checks to see whether you have pressed CTRL+C only while it is reading from the keyboard or writing to the screen or the printer. If you type **break on**, you extend CTRL+C checking to other activities, such as reading from or writing to a disk. The default in the DOS session is **off** (unless otherwise set in your CONFIG.SYS file by the **break** configuration command).

The **break** command has no effect on a full-screen OS/2 session; MS OS/2 always checks for CTRL+C.

If you type **break** by itself, the command displays its current setting.

Some programs are designed to respond to CTRL+C at any time; the **break** command does not affect them.

In the DOS session, when you use CTRL+C to stop the processing of a batch file, MS OS/2 displays a message that asks you to confirm whether you want to stop the batch process. In a full-screen OS/2 session, however, you receive no message; once you press CTRL+C, the batch file stops.

Break



CONFIG

break=on | off

Tells MS OS/2 when to check for the CTRL+C (or CTRL+BREAK) key combination in the DOS session and to stop the program or batch file that is running when it encounters the combination. To use the **break** configuration command, place it in your CONFIG.SYS file.

If **break** is off, MS OS/2 checks whether you have pressed CTRL+C only when it is reading from the keyboard or sending something to the screen or the printer. When **break** is on, MS OS/2 also checks for CTRL+C every time it reads from or writes to a disk. The default setting for **break** in the DOS session is **off**.

The **break** configuration command has no effect on a full-screen OS/2 session; MS OS/2 always checks for CTRL+C.

Buffers



buffers=number

Sets the number of buffers in memory. To use this command, place it in your CONFIG.SYS file.

number

Specifies the number of buffers available. This must be a number in the range 1 to 100; the default is 3.

Buffers are work areas MS OS/2 uses to hold data when it is reading from or writing to a disk. Each buffer uses 512 bytes of memory. You can speed up your system's performance by increasing the number of buffers available, but when you do so you also reduce the amount of memory available. For applications like word processors, you'll get the best performance with between 10 and 20 buffers; if you expect to create many subdirectories, you may want to increase the number of buffers to between 20 and 30.

Example To tell your system to create 20 disk buffers, include the following line in your CONFIG.SYS file:

```
buffers=20
```

Call



call [*drive:*][*path*]*batchfile* [*arg*]

Calls one batch file from another. You use **call** in a batch file in order to run another batch file and then return to the first one. Although **call** can be used from the command prompt, it is designed to be placed in a batch file.

batchfile

Specifies the name of the batch file (without extension) that you want to call from within another batch file.

arg

Specifies an argument to the batch file being called.

When you use **call**, MS OS/2 treats everything in the batch file that you call as though it were a single command; once that command has been carried out (that is, once the second batch file has been run), MS OS/2 resumes running the first batch file where it left off.

Do not use pipes or redirection symbols with the **call** command.

You cannot call DOS batch files (files with the extension .BAT) from an MS OS/2 batch file (a file with the extension .CMD) or from **cmd**, the MS OS/2 command interpreter.



Works the same way in the DOS session as described above, except that you cannot call MS OS/2 batch files (files with the extension .CMD) from a DOS batch file (a file with the extension .BAT) or from **command**, the DOS command interpreter.

Example To run the file CHECKNEW.CMD from another MS OS/2 batch file and pass it the */t* argument, type the following in the first batch file:

```
call checknew /t
```

Cancel All Jobs



Removes all the jobs from a printer queue. If one of the jobs is printing, it stops printing and disappears from the queue.

When you choose this command, a dialog box appears, asking you to confirm that you want to cancel all the jobs in the queue.

Note that if your printer uses a print buffer, the contents of this buffer continue to be printed until the buffer is empty, even after all jobs are removed from the queue.

Cancel Job



Removes a job from the printer queue. If the job is printing, it stops printing and disappears from the queue.

When you choose this command, a dialog box appears, asking you to confirm that you want to cancel the job.

Note that if your printer uses a print buffer, the contents of this buffer continue to be printed until the buffer is empty, even after the job is removed from the queue.

Cascade



Resizes and rearranges the directory windows within the File System window so that they overlap and part of each window is visible (usually including the title bar).

The windows all become the same size, if possible, and are arranged from top left to bottom right.



Resizes and rearranges application windows within the screen window so that they overlap and part of each window is visible (usually including the title bar).

The windows all become the same size, if possible, and are arranged from top left to bottom right.

Change



Changes the name of a program in Start Programs, and changes or adds to the information that Start Programs uses in starting the program.

When you choose this command, a dialog box appears, containing text boxes in which you can enter the following information:

- A title for the program (this is the title that will appear in the list in Start Programs). The title can be up to 60 characters and can include letters, numbers, spaces, and any symbols except the backslash (\). You can use a given program title only once within each group, but you can include the same program more than once in a group if you use different titles.
- The filename and directory path of the file that contains the program. If you give only the filename, MS OS/2 first searches the directory from which you started MS OS/2 and then searches the directories specified by the PATH environment variable for the program.
- The current directory. The default is the root directory of the current drive.
- Arguments that you want to give the program. If you want to be prompted for arguments whenever the program starts, type a question mark (?) in this text box.
- Program type (Presentation Manager or Other). If you choose Other, another dialog box appears, asking you whether you want the program to run in a window or full-screen, or whether you want the application to decide.

Every program in Start Programs must have a program name and a filename and directory path; the other information is optional.

Change Attributes



Changes the attributes of a file or files.

When you choose this command, a dialog box appears, containing four check boxes: Read Only, Archive, Hidden, and System. You can use these check boxes to turn the appropriate attributes on or off.

When Read Only is turned on, the file can be read but not changed.

When Archive is turned on, the **backup**, **restore**, and **xcopy** utilities treat the file as a new or changed file.

When Hidden is turned on, the file will not appear in the list in a directory window unless you have also turned on the Hidden Files check box by using the Display Options command on the Options menu.

When System is turned on, MS OS/2 recognizes the file as a system file. The file will not appear in the list in a directory window unless you have also turned on the Hidden Files check box by using the Display Options command on the Options menu.

Chcp (Change Code Page)



chcp [*nnn*]

Switches to the specified system code page, which must have been defined previously in your CONFIG.SYS file.

nnn Specifies the code page to be used. This argument must be a three-digit number from the list under the **codepage** command.

If you type **chcp** by itself, the command displays the active code page and the prepared code pages for that session.

This command can be used only if code pages have been previously prepared with the **codepage** command.

Any program that you run after starting a new code page uses the new code page. Programs that started running before you started the new code page still use the original code page.



Works the same way in the DOS session as described above, except that when you type **chcp** by itself, the command displays only the active code page.

Example To switch the code page to 863 (French-Canadian), type the following:

```
chcp 863
```

Chdir (Change Directory)



chdir [*drive:*][*path*]

Changes the current directory. You can abbreviate **chdir** as **cd**.

If you type **chdir** by itself, the command displays the current directory of the current drive.

You cannot use **chdir** to change drives, but you can use it to change the current directory of another drive. If you then switch to that drive, you will be in the directory you specified. Typing **chdir** plus the letter of another drive displays the name of the current directory on that drive.



Works the same way in the DOS session as described above.

Examples To change from your current directory to the ENTREE subdirectory, type the following:

```
cd entree
```

To change from your current directory to its parent directory, type the following:

```
cd ..
```

To return to the root directory, type the following:

```
cd \
```

If your current directory is POETRY and its parent directory is BOOKS, and you want to change to the FICTION directory, which is also under BOOKS, type the following:

```
cd ../fiction
```

Chkdsk (Check Disk)



chkdsk [*drive:*][*path*][*filename*] [*/f*] [*/v*]

Checks a disk for errors and displays a summary of how space is used on that disk.

drive:

Specifies the disk drive to check.

filename

Specifies the file to check. You can use wildcard characters to specify a group of files. **Chkdsk** will report how many of the specified files are stored in noncontiguous sectors.

/f Tells MS OS/2 to correct errors it finds on the disk. If you do not specify this option, **chkdsk** does not correct any errors, even if you respond with "Y" to the prompt.

/v Displays the name of each file in each directory as it is checked.

If you type **chkdsk** by itself, the utility displays the status of the disk in the current drive. If you specify a filename but no drive, **chkdsk** displays the status of the disk in the current drive and of the individual file.

If you specify the **/f** option, **chkdsk** shows an error if there are any open files on the disk. If you do not specify **/f** and there are open files, **chkdsk** may report that there are lost clusters on the disk. This happens when the disk's file allocation table has not been updated regarding open files.

Do not try to fix errors while you are using the multitasking features of MS OS/2, such as background printing or spooling.

The **chkdsk** utility will not fix errors on the disk from which you started MS OS/2. For more information about interpreting **chkdsk** messages and about fixing errors on your start-up disk, see the *Microsoft Operating System/2 User's Guide*.

DOS

Works the same way in the DOS session as described above, except that the DOS version displays the amount of memory used in the DOS session.

You cannot use **chkdsk** on drives that you have assigned, joined, or substituted by using the **assign**, **join**, or **subst** utility.

Close



Closes File System or Control Panel.

This command has the same effect as the Exit command that is on an application's Exit menu.



Closes an application from the Task Manager list.

You must select the application to close before you choose the Close command.

This command has the same effect as the Exit command that is on an application's Exit menu.

Close All Directories



Closes all the directory windows you have open in File System, leaving only the Directory Tree window visible.

Cls (Clear Screen)



cls

Clears the screen, leaving only the prompt and the cursor.



Works the same in the DOS session as described above.

Cmd (MS OS/2 Command Interpreter)



cmd [*drive:*][*path*] [*/s*] [*/c command(s)*] [*/k command(s)*]

Starts an MS OS/2 command interpreter in the specified directory on the specified drive.

drive:path

Specifies the location of the new command interpreter. If you do not specify a drive and/or path, MS OS/2 uses the command interpreter specified by the COMSPEC environment variable.

/s Tells the new command interpreter not to set up the signal handler.

/c command(s)

Tells the new command interpreter to perform the command or commands specified and then return control to the command interpreter that called it.

/k command(s)

Tells the new command interpreter to perform the command or commands specified and then continue to run.

If you type **cmd** by itself, MS OS/2 starts the new command interpreter in the current session.

When you start a command interpreter, you also create a command environment. This environment is a copy of the environment from which you started the command interpreter. You can change this new environment without affecting the old environment.

For an alternative way to run **cmd** and have it start other commands, see the **start** command.

Example To start **cmd** and have it check the disk in drive B and then end, type the following:

```
cmd /c chkdsk b:
```

Codepage



codepage=xxx[,yyy]

Selects the code pages that the system will use. To use this command, place it in your CONFIG.SYS file.

xxx Specifies the first code page. This must be a three-digit number from the list on the next page.

yyy Specifies the optional second code page. This must be a three-digit number from the list on the next page.

If you specify two code pages, you will be able to switch between them by using the **chcp** command.

Code page, keyboard, and country are interrelated. A code page is a set of characters that are available to your system for use on the screen, for printing, and for sending to any other sort of output. Your keyboard layout tells your system which characters from the character set correspond to which keystrokes; this can be different from country to country. The country you are working in (or for which you want to set up your system) determines which two code pages you should use. (For a list of country codes and their corresponding code pages, see the **country** command.) You can change keyboard layouts without having to change code pages.

MS OS/2 supports the following five code pages:

Code page	Character set
437	United States
850	Multilingual
860	Portuguese
863	French-Canadian
865	Nordic

The United States code page (437) includes most of the characters needed for most Western European languages, but the Multilingual code page (850), which is also used by systems other than personal computers, is more versatile and more complete. You would usually want to specify code page 850 as the second code page, no matter what national code page you specified first. For tables of the character sets in the five code pages, see the Appendix, "Code Pages and Keyboard Layouts."

If you are setting up an outside device, such as a printer, to use code pages, you must also use the **devinfo** command to tell the outside device which code pages to use. For more information, see the **devinfo** command.

Example To set up your system to use code pages 437 and 850, include the following line in your CONFIG.SYS file:

```
codepage=437,850
```

Collapse Branch



Completely collapses the selected branch of the directory tree so that none of the subdirectories in that branch will be displayed.

If the directory that is selected in the Directory Tree window is already collapsed or does not have any subdirectories, this command is disabled.

To use this command, Show Outline Tree must be active.

COM0x.SYS



device=*[drive:]**[path]***com0x.sys**

Directs MS OS/2 to load the COM0x.SYS device driver, which allows you to use your system's serial communications port. To use this command, place it in your CONFIG.SYS file.

- x* Specifies which communications-port device driver to load. For an IBM PC/AT or compatible computer, *x* must be 1. For an IBM PS/2 computer, *x* must be 2.

Example To direct MS OS/2 to load the communications-port driver for your IBM PC/AT or compatible computer, add the following line to your CONFIG.SYS file:

```
device=c:\os2\com01.sys
```

Note If you have a Microsoft serial mouse, you must include the MOUSEA02.SYS device driver in CONFIG.SYS before including the COM01.SYS device driver, as follows:

```
device=c:\os2\mousea02.sys  
device=c:\os2\com01.sys
```

Command



command *[drive:]**[path]* *[/c command(s) | /p]* *[/e:size]*

Starts a secondary DOS command interpreter in the DOS Session.

drive:path

Specifies the location of the secondary command-interpreter. If you do not specify a drive and/or path, MS OS/2 uses the command interpreter specified by the COMSPEC environment variable.

/c command(s)

Tells the secondary command interpreter to perform the command or commands specified and then return control to the primary command interpreter.

/p Tells the secondary command interpreter to stay in memory. This disables the **exit** command; you must restart your system in order to remove the secondary command interpreter.

/e:size

Specifies the size of the DOS environment, in bytes. This number must be in the range 160 to 32768; it is rounded up to a multiple of 16. The default is 160.

When you start a command interpreter, you also create a command environment. This environment is a copy of the environment from which you started the command interpreter. You can change the new environment without affecting the old environment.

Example To start a secondary DOS command interpreter and have it check the disk in drive B and then return to the primary command interpreter, type the following:

```
command /c chkdsk b:
```

Communications Port



Sets the parameters for a communications port (COM1, COM2, or COM3).

When you choose this command, a dialog box appears, in which you can choose settings for baud rate, word length, parity, stop bits, and the handshake protocol for the communications port. (You can also set these values by choosing the Printer Connections command and then choosing the Comms button from the Printer Connections dialog box.)

For more information about these settings, see the **mode** utility.

Comp (Compare)



comp [drive:][path][filename1] [drive:][path][filename2]

Compares two files or sets of files to see whether they are the same.

filename1

Specifies the name of the first file.

filename2

Specifies the name of the second file. If *filename2* is the same as *filename1* except that the file is on a different drive, you can type just the drive letter of the second file.

If you specify only a path or a drive, without any filename, **comp** assumes that you want to compare all the files in that directory or on that drive.

If you type **comp** by itself, the utility prompts you for the filenames. You can use wildcard characters to specify a group of files.

If the files found in one directory differ in size from the files found in the other directory, **comp** displays a message asking if you want to continue. If the files are the same size but their contents differ, **comp** automatically displays the location and contents of each nonmatching byte.



Works the same way in the DOS session as described above.

Examples To compare each file with the extension .DOC in the current directory on drive C with each file of the same name with the extension .BAK on drive B, type the following:

```
comp c:*.doc b:*.bak
```

To compare the files in the root directory on drive A with the contents of the TEMP directory on drive C, type the following:

```
comp a: c:\temp
```

To compare the contents of the SALES directory with the current directory, type the following:

```
comp \sales .
```

Control Panel



Changes system settings.

Some settings, such as time and date, can be adjusted directly in the main Control Panel window. You can make other settings by selecting one of the Control Panel menus: Preferences, Setup, Installation, or Exit.

- The Preferences menu contains the Screen Colors, Border Width, Warning Beep, Mouse, Logo Display, and Country commands.
- The Setup menu contains the Communications Port, Printer Defaults, Printer Connections, Spooler Options, Spooler Queues, and Queue Connections commands.
- The Installation menu contains the Add Font, Delete Font, Add Printer Driver, Delete Printer Driver, Add Queue Processor, and Delete Queue Processor commands.
- The Exit menu contains the Exit Control Panel and Resume commands.

For more information about a specific Control Panel command, see the individual entry for the command.

Copy



Copies a file, a group of files, a directory, or a group of directories.

When you choose this command, a dialog box appears, containing two text boxes: From and To. The From text box shows the names of the files or directories you have selected from the directory window. In the To text box, you can type the drive and path of the destination directory (the directory you want to copy your files or directories to). You don't need to type the drive letter unless you are copying to a different drive.

If you are copying only one file or directory, you can copy it and rename it at the same time by typing a new name in the To text box. If

you rename a directory, it shows a new date and time of creation when you display full file details; otherwise, the date and time stay the same.

You can copy multiple files or multiple directories (or even files and directories together) by extending the selection in the directory window before you choose Copy, or by typing multiple names in the From text box. You can also copy multiple files with similar filenames by using wildcard characters.

Unlike the command-line **copy** command, the Presentation Manager Copy command does not recognize multiple destination filenames; it ignores all but the first name in the To text box.

Warning If you are copying a file and you supply a destination filename that already exists, MS OS/2 overwrites the destination file. (If you have turned on the Confirm On Replace option by using the File Options command on the Options menu, MS OS/2 first displays a dialog box, asking you whether you want to overwrite the file.)

If you want to copy multiple files, do not specify a destination filename. If you do, MS OS/2 will copy the first source file and give it the destination filename; then copy the second source file, give it the same destination filename, and overwrite the first file; and so on until all the files have been copied. The result is one file, and its contents will be the contents of the last source file.

If you are copying multiple directories and you supply a destination name, MS OS/2 will copy the first source directory and give it the destination name, then copy the remaining source directories into the first as subdirectories.



Copies a program title in Start Programs to another group.

When you select a program title from the Start Programs list and then choose this command, a dialog box appears, containing a list box with the names of the existing groups of programs and a text box where, optionally, you can type a new title for the program. To complete the command, select the group to which you want to copy the program title and choose the Copy button.

This command does not copy files; it only copies the title of the program as it is listed in Start Programs.

(You can also use this command instead of the Add command to create an additional title for a program within the same group.)

Copy



copy *source* [+ *source* [...]] [/a | /b] *destination* [/a | /b] [/v]

Copies information from a source to a destination. The source is usually a file or files, but it can also be a directory or the output of a device (such as the keyboard); the destination can be one or more files or a device.

source

Specifies where the information will be copied from. If the source is a file, MS OS/2 assumes that the file is in the current directory on the current drive, unless you tell it otherwise by specifying a drive and path. The source can also be a drive or a directory. You can copy multiple files by using wildcard characters. You can copy multiple source files to one destination file by specifying multiple source filenames separated with plus signs (+). If the source is a device, MS OS/2 takes the input from that device and copies it to the destination.

destination

Specifies where the information will be copied to. The destination can be a single file or you can use wildcard characters to specify a group of files. The destination can also be a directory or a device. If you specify only a drive as the destination, MS OS/2 copies to the current directory on that drive; if you do not specify a drive, MS OS/2 assumes that the destination is on the current drive. If the destination is a file that does not already exist, **copy** creates a new file; if the file already exists, **copy** writes over the old file.

- /v** Verifies one by one that the sectors written on the destination disk are recorded properly.
- /a** Treats the source or destination as ASCII text. This option applies to the filename preceding it and all remaining filenames in the command until **copy** encounters a **/b** option, in which case the **/b** option applies to the filename that precedes it. When **/a** comes after the source, **copy** copies everything up to the first CTRL+Z character, which it interprets as an end-of-file mark, and does not copy anything after that. When **/a** comes after the destination, **copy** adds an end-of-file character as the last character of the destination file. When you are copying multiple files to one destination, the default option is always **/a**.

- /b** Treats the source or destination as a binary file. This option applies to the filename preceding it and all remaining filenames in the command until **copy** encounters a **/a** option, in which case the **/a** option applies to the filename that precedes it. When **/b** comes after the source, **copy** copies everything and does not interpret any CTRL+Z characters as end-of-file marks. When **/b** comes after the destination filename, **copy** does not add an end-of-file character to the new file.

When you use **copy** to append files to an existing file without changing the existing filename (including its extension), you must specify that filename as the first source file, followed by the names of the files you want to append.

When you copy a single file to a new file, the new file has the same date and time as the original. When you combine files into a new file, the new file has the current date and time.



Works the same in the DOS session as described above, except that you cannot specify multiple filenames on the command line.

Examples To copy the file COMPANY.NEW from the current drive and directory to the CUSTOMER directory on the disk in drive B, type the following:

```
copy company.new b:\customer
```

To copy all the files in the directory REPORTS on your hard disk (drive C) to the disk in drive A, type the following:

```
copy c:\reports\*. * a:
```

To combine the files INTRO.RPT, BODY.RPT, and SUM.RPT from your working drive and directory and place them in a file called REPORT on the disk in drive B, type the following:

```
copy intro.rpt + body.rpt + sum.rpt b:report
```

If you omit the destination filename, MS OS/2 combines the files and stores them under the name of the first specified file.

To combine all files with the extension .TXT into one file named COMBIN.DOC, type the following:

```
copy *.txt combin.doc
```

To combine each file that has the extension .TXT with the corresponding file that has the extension .REF and place the results into files with the extension .DOC (for example, VIDEO.TXT and VIDEO.REF would be combined as VIDEO.DOC), type the following:

```
copy *.txt + *.ref *.doc
```

To copy all files with the extension .TXT and all files with the extension .REF into one file named COMBIN.DOC, type the following:

```
copy *.txt + *.ref combin.doc
```

Country



Sets the format and characters used to display time, date, numbers, and currency. By default, MS OS/2 uses the United States format.

When you select this command, a dialog box appears, in which you can specify the settings you want.

Note Before using this command, be sure that you have correctly set up code-page information in your CONFIG.SYS file. For more information about how to do this, see the *Microsoft Operating System/2 User's Guide* and the entries in this reference for the **codepage** and **devinfo** commands.

Country



country=xxx[[drive:][path]filename]

Tells MS OS/2 which country to set up the system for. To use this command, place it in your CONFIG.SYS file.

xxx Specifies the country by using a three-digit country code from the list on the next page. You must include all three digits, even if the code begins with a zero. The default is 001 (United States).

filename

Specifies the file that contains information on country conventions and supported code pages. If you do not specify a drive or path, MS OS/2 looks for this file in the current directory of the current drive. If you do not specify **filename**, MS OS/2 uses the default

COUNTRY.SYS file in the root directory of the drive from which you started MS OS/2.

The country you choose determines the MS OS/2 conventions for such things as time and date format, decimal separators, and the order in which the **sort** utility sorts ASCII characters. The country you specify with the **country** command also determines which code pages you should specify with the **codepage** command.

The following list shows the countries or languages that you can specify with the **country** command, the corresponding country codes, and the code pages supported for each country:

Country or language group	Country code	Code pages
Australia	061	850,437
Belgium	032	850,437
Canada (English)	001	850,437
Canada (French)	002	863,850
Denmark	045	865,850
Finland	358	850,437
France	033	850,437
Germany	049	850,437
Italy	039	850,437
Latin America	003	850,437
Netherlands	031	850,437
Norway	047	865,850
Portugal	351	860,850
Spain	034	850,437
Sweden	046	850,437
Switzerland	041	850,437
United Kingdom	044	850,437
United States	001	850,437

Note Although not shown in the list, the following countries or languages are also available with special versions of MS OS/2: Arabic, Asia, Hebrew, Japan, Korea, and Taiwan.

In the preceding list, the first of the two code pages for each country is the default code page for that country. If you do not include the **codepage** command in your CONFIG.SYS file, MS OS/2 uses the system default code page.

Example To set up your system for the Netherlands and tell MS OS/2 to look for COUNTRY.SYS in the OS2 directory on the disk in drive A, include the following line in your CONFIG.SYS file:

```
country=031,a:\os2\country.sys
```

Create Directory



Creates one or more directories.

When you choose this command, a dialog box appears, containing a text box in which you can type the name of the directory you want to create. You can create multiple directories by typing multiple directory names in the text box, separating each by a single space. If the new directory is to be a subdirectory of the current directory, you need type only the directory name; if you want the new directory to be a subdirectory of a different directory, you must type the directory path.

Createdd (Create Dump Disk)



createdd *drive*:

Prepares a disk that can be used to copy the contents of memory.

drive:

Specifies the drive that contains the disk to be used for copying memory contents.

The **createdd** utility prepares a special disk to be used to copy the contents of memory. A copy of memory contents may be helpful in identifying system problems.

To copy memory contents to a disk, insert the disk prepared by using **createdd** into the disk drive and press CTRL+ALT+NUMLOCK twice. If

there is more information than can fit on the single disk, MS OS/2 prompts you to insert additional disks. These additional disks need only to have been formatted. When the copying operation is completed, MS OS/2 prompts you to reinsert the disk created by using **createdd** to receive a summary record of the operation. (If you use more than one disk, you receive summary information for each disk.) The system then stops, and you must restart it.

Do not start the copying operation while the hard disk is being read from or written to. This could disrupt directory information on the hard disk, causing files to be lost.

Example To prepare a disk in drive A for copying memory contents, type the following:

```
createdd a:
```

Date



date [*month-day-year*]

Sets the system calendar by telling it the current date.

month

Specifies a number in the range 1 to 12.

day Specifies a number in the range 1 to 31.

year Specifies a four-digit number in the range 1980 to 2079. You can abbreviate this number by using the last two digits of the year, in the range 80 to 79.

You can use slashes (/) or periods (.) instead of hyphens (-) to separate the month, day, and year.

If you type **date** by itself, the command shows you the current date and then prompts you for a new date. If you don't want to change the date, just press ENTER.

If you have used the **country** configuration command in your CONFIG.SYS file to alter the date format (for instance, to specify a date as day-month-year), the **date** command will reflect that change.



Works the same way in the DOS session as described above.

Example To set the system date to May 1, 2017, type the following:
`date 5-1-17`

Ddinstal



ddinstal

Provides an automated way to install new devices and their device drivers on your system without running the installation program again. **Ddinstal** copies the device driver to your system and adds the appropriate **device** command to your CONFIG.SYS file.

To install a device using the **ddinstal** utility, type **ddinstal** and press ENTER. The utility will prompt you to insert the disk that contains the device driver to be installed.

Del (Delete or Erase)



del [*drive:*][*path*]*filename* [...]

Deletes a file or group of files.

filename

Specifies the name of the file to be deleted. You can use wildcard characters to delete more than one file in a directory; you can also specify more than one file by typing their names individually, separated by spaces.

You can type **del *.*** to delete all the files in the current directory. (You cannot, however, delete the directory itself by using **del**.) To delete all the files in another directory, type only **del** followed by the

directory name. To prevent you from accidentally deleting important files, the following message appears when you type either of the preceding commands:

Are you sure (Y/N)?

Warning Once you have deleted a file from your disk, it is gone; you cannot recover it. Be sure you have specified the right file or files, with the correct path, before you press ENTER.

You can type **erase** instead of **del** if you prefer; they have the same effect.



Works the same way in the DOS session as described above, except that in the DOS session you cannot specify multiple filenames. You can, however, use wildcard characters to delete more than one file in the same directory.

Example To delete all the files in the current directory of drive C that have the extension .BAK, and to delete the file OLDSTUFF.DOC in the directory MEMOS on drive B, type the following:

```
del c:*.bak b:\memos\oldstuff.doc
```

Delete



Deletes a file, a group of files, a directory, or a group of directories.

When you choose this command, a dialog box appears, containing a text box with the names of the files or directories you have selected from the directory window. You can add to or change these names by typing new names or modifying the names that are already there.

You can delete multiple files or multiple directories (or even files and directories together) by extending the selection in the directory window before you choose Delete or by typing multiple names in the text box. You can also delete multiple files with similar filenames by using wildcard characters.

You can also set two options for Delete: Confirm On Delete and Confirm On Subtree Delete. For details about these two options, see the File Options command.



Deletes a group from Start Programs.

When you choose this command from the Group menu, a dialog box appears, containing a list box with the names of the existing program groups. To delete a group, select it from the list box and then choose the Delete button.

A group must be empty before you can delete it; to delete the program names in the group, use the Delete command from the Program menu. You cannot delete the last group in Start Programs, even if it is empty.



Deletes a program title from Start Programs.

When you select the title of a program from the list in the current group and then choose this command from the Program menu, a dialog box appears, asking you whether you want to delete the selected program title.

Deleting a program from Start Programs does not delete the file that contains the program; it only removes the program's title from the current group. This means that you can no longer start the program from Start Programs (unless you have it in another group).

Delete Font



Deletes a font from your system.

When you choose this command, a dialog box appears, containing list boxes with the names of the font files and fonts on your system. Select the font file containing the font you want to delete in the Font File box and the font itself in the Font Names box.

Because font files contain several fonts, you must remove all the fonts you have added to your system before you can delete the file itself.

Delete Printer Driver



Deletes a printer driver and, optionally, a printer-driver file from your system.

When you choose this command, a dialog box appears, listing the available printer drivers and showing the name of the printer-driver file for the currently selected driver. You delete a printer driver by selecting its name from the list and choosing the Delete button.

After you delete a printer driver, MS OS/2 asks you if you also want to delete the corresponding printer-driver file. If you choose the Yes button, the file is deleted. Do not delete the file if it contains other printer drivers you have added to the system. If you delete a printer-driver file and later need it, you must reinstall the file from your backup copy.

Delete Queue Processor



Deletes a queue processor from your system.

When you choose this command, a dialog box appears, listing the available queue processors and showing the name of the queue-processor file for the currently selected queue processor. You delete a queue processor by selecting its name from the list and choosing the Delete button.

Demonstration Programs



Switches you to the Demonstration Programs group. Programs in this group demonstrate the features of MS OS/2 in ways that are entertaining as well as instructional.

When you first start MS OS/2, the Main Group is automatically selected. To switch to the Demonstration Programs group, select the Group menu and choose Demonstration Programs. Start Programs then places a check mark next to Demonstration Programs and displays the list of programs in this group.

Deselect All



Removes the selection from all but one of the files and directories in the active directory window; the file or directory that you selected most recently is the only one left selected.

Detach



detach *command* [*options*]

Detaches a special process to run in the background while you go on to another task.

command

Specifies any MS OS/2 program or command that does not require you to type input from the keyboard.

options

Specifies any valid options that the program or command can accept in the command line.

When you detach a process, MS OS/2 starts it as an independent process, displays the process identification (PID) number, and immediately displays the MS OS/2 prompt. You can then type other commands while the detached process is running in the background.

You should not detach programs that require keyboard input.

You can run programs in the background sequentially by listing their names in order, separated by ampersands (&).

You cannot stop a detached process; it must complete itself on its own. If you delete the parent process (quit the command interpreter, for instance), the detached process still runs until it is finished.

If you try to detach a program that should not be run in the background, you could ruin files or lose valuable information. The documentation for the program should tell you whether it can be detached safely.

Examples To create an alphabetically sorted listing of the SORT.IN file and put it in a file called SORT.OUT, and to have this process run in the background so that you can run another process while it is sorting, type the following:

```
detach sort < sort.in > sort.out
```

To copy files from the current directory to drive D and then place the directory listing in FILES.LST, and to have these processes run in the background, type the following:

```
detach copy *.* d: & dir d: > files.lst
```

Device



device=[drive:][path]filename [arguments]

Tells MS OS/2 where to find the file that contains a device driver. To use this command, place it in your CONFIG.SYS file.

filename

Specifies the name of the file that contains the device driver. If this file is not in the root directory of the start-up drive, you must include the drive and/or path.

arguments

Specifies any valid options or other variables for the specific device driver.

Each device connected to your system needs its own device driver, and each driver requires a separate **device** line in your CONFIG.SYS file.

You generally receive a device driver on a disk when you buy a new device; be sure that you place the device driver in the directory you specify with the **device** command.

MS OS/2 processes **device** commands in the order in which they appear in your CONFIG.SYS file and before it processes any **run** commands in the file.

Example To use the Microsoft InPort® mouse and tell MS OS/2 that the device driver is in the OS2 directory on your hard disk (drive C), include the following line in your CONFIG.SYS file:

```
device=c:\os2\mousea04.sys
```



Devinfo (Device Information)



devinfo=*devtype,subtype,[drive:][path]filename*
[,ROM=[(*xxx[,yyy]*)]**][...]**

Prepares a device to use code pages. To use this command, place it in your CONFIG.SYS file.

devtype

Specifies the type of device: keyboard, monitor, or parallel printer. See the list on the next page for possible values.

subtype

Specifies the style or model of the device. For a keyboard, this argument would specify the keyboard layout. See the list on the next page for possible values.

filename

Specifies the file that contains information about the code pages for that device. See the list on the next page for possible values.

ROM=

Tells MS OS/2 that code pages are available to a printer, either in the printer's read-only memory or in a cartridge. This and the following options apply only to parallel printers.

- xxx** Specifies a code page that is available for a parallel printer. Each code page is identified by a three-digit number; for a list of the possible code pages, see the **codepage** command. A printer may support more than one code page.
- yyy** Specifies a font identification number that identifies a font on a parallel printer and associates that font with a particular code page. A code page may have more than one font associated with it. See your printer manual for font identification numbers.

You must include a separate **devinfo** command in your CONFIG.SYS file for each device connected to your system, including the keyboard and the monitor, if you want to be able to switch code pages. The **devinfo** command tells MS OS/2 what kind of device you have connected to your system and where to find the code-page or keyboard information for that device.

MS OS/2 automatically places certain **devinfo** commands in your CONFIG.SYS file during the installation process.

The following list shows the values you can give to *devtype*, *subtype*, and *filename*:

Argument	Keyboard	Monitor	Printer
<i>devtype</i>	KBD	SCR	PRN, LPT1, LPT2, LPT3
<i>subtype</i>	keyboard code	EGA, VGA	4201, 5202
<i>filename</i>	KEYBOARD.DCP	VIOTBL.DCP	4201.DCP, 5202.DCP

Keyboard code is a two-letter code that identifies the keyboard layout for a particular country. For a list of the possible keyboard codes, see the **keyb** utility.

Examples To prepare your keyboard to use the code pages you have specified with the **codepage** command, to use the United Kingdom keyboard layout, and to look for the file that contains code-page information in the OS2 directory on your hard disk (drive C), include the following line in your CONFIG.SYS file:

```
devinfo=kbd,uk,c:\os2\keyboard.dcp
```

To prepare an IBM Quietwriter III to use code pages 437 and 850, with multiple fonts, include the following line in your CONFIG.SYS file (type this as a single line, even though it appears here on more than one line):

```
devinfo=lpt1,5202,5202.dcp,rom=(437,011),  
(437,085),(437,254),(437,159),(850,254),  
(850,159)
```

Dir (Directory)



dir [*drive:*][*path*][*filename*] [...] [*/p*] [*/w*]

Displays a list of the files on a disk or in a directory, with information about the size of each file and when it was created, the number of files in the directory, and the number of bytes free on the disk.

path Specifies the directory whose listing you want to display.

filename

Specifies a particular file whose listing you want to display. If you specify a filename, **dir** displays information about that file alone. You can use wildcard characters to get information about groups of files with similar names—for example, to compare the dates and sizes of several files with the same extension.

/p Displays the listing one screenful at a time.

/w Lists only the filenames (including their extensions) and displays them across the width of the screen in several columns.

You can specify several drives, directory paths, or filenames. For each different drive or directory you specify, **dir** displays a separate list of files. If, however, you specify more than one file or group of files in the same directory, **dir** displays them in a single list for that directory.

If you type **dir** by itself, the command displays information on all the files in the current directory of the current drive.



Works the same way in the DOS session as described above, except that in the DOS session you cannot specify multiple directories or filenames. You can, however, use wildcard characters in filenames.

Example To display a list of all the files in the LETTERS directory on drive C and a list of all the files with the extension .LTR in the OFFICE directory on drive B, and to display them as short, wide lists across the screen, type the following:

```
dir c:\letters b:\office\*.ltr /w
```

Directory Tree



Displays the contents of the Directory Tree window.

Every directory window that is currently open in File System is listed on the Window menu; the Directory Tree window is always listed first, and the name of the active window has a check mark next to it. (If more than eight windows are open at once, including the Directory Tree window, the ninth name listed is More; if you choose More, a dialog box appears, listing all the open directory windows.) To display the Directory Tree window if it is not the active window, choose Directory Tree from the menu.

Diskcache



diskcache=*n*

Enables disk caching and tells MS OS/2 how much space in memory to set aside for the disk cache. To use this command, place it in your CONFIG.SYS file.

n Specifies the number of kilobytes of memory to be set aside for the disk cache. This number must be in the range 64 to 7200.

A disk cache is an extra buffer in which MS OS/2 stores information that it has recently read from your hard disk. When an application needs to read information from the hard disk, it looks first in the disk cache to see if the information is there. Since it is much faster to read from the disk cache than to read from the hard disk, disk caching can speed up your system. However, the disk cache uses part of system memory, so less memory will be available to an application.

MS OS/2 uses part of the memory set aside for the disk cache for control information. The amount of memory required for control information depends on the size of your hard disk(s).

To change the size of the disk cache, you change the **diskcache** command in your CONFIG.SYS file and then restart your system.

Example To set aside 128 kilobytes of memory for disk caching, include the following line in your CONFIG.SYS file:

```
diskcache=128
```

Diskcomp (Disk Compare)



diskcomp [*drive1:*] [*drive2:*]

Compares two floppy disks track by track.

drive1:

Specifies the drive letter of the first disk being compared.

drive2:

Specifies the drive letter of the second disk being compared.

Since **diskcomp** automatically determines the number of sides and sectors per track by looking at the format of the first disk, both disks must be of the same type (for instance, high-density 5¼-inch disks).

If you specify only one drive, **diskcomp** compares the floppy disk in *drive1* with the floppy disk in the current drive. If you specify the same drive for both *drive1* and *drive2*, **diskcomp** assumes that you want to use only one drive and prompts you to change disks as needed during the comparison. If you type **diskcomp** by itself, the utility assumes that you want to use only the current drive and prompts you to insert the two disks, as appropriate. (If the current drive is not a floppy-disk drive, you will see an error message.)



Works the same way in the DOS session as described above.

You cannot use **diskcomp** on drives that you have assigned, joined, or substituted by using the **assign**, **join**, or **subst** utility.

Example To compare two high-density floppy disks when you have only one high-density disk drive (drive A), type the following:

```
diskcomp a: a:
```

Diskcomp prompts you to insert each disk in turn, as needed, during the comparison.

Diskcopy



diskcopy [*drive1:*] [*drive2:*]

Makes a duplicate of a floppy disk.

drive1:

Specifies the drive that contains the floppy disk to be copied (the source disk).

drive2:

Specifies the drive that contains the floppy disk that will become the duplicate (the destination disk).

The two disks must be of the same type (for example, high-density 5¼-inch floppy disks). **Diskcopy** formats the destination disk if it is unformatted, with the same number of sides and sectors per track as the source.

You can copy a disk using only one drive, either by not specifying any drives or by specifying the same drive for both source and destination. **Diskcopy** prompts you to insert the two disks as needed. If you do not specify any drives, **diskcopy** assumes that you want to use the current drive.

Diskcopy writes over the information on the destination disk, even if it doesn't have to format the disk, so any information that is already on the disk is lost.



Works the same way in the DOS session as described above.

You cannot use **diskcopy** on drives the you have joined or substituted by using the **join** or **subst** utility. **Diskcopy** ignores any assignments that you have made using the **assign** utility.

Example To copy the floppy disk in drive A to a floppy disk in drive B, type the following:

```
diskcopy a: b:
```

Display Options



Determines how the information about files and directories will be displayed in a directory window in File System.

If you have selected the Directory Tree window before you choose this command, the options you choose affect all the directory windows; if you have selected any other directory window before you choose this command, the options you choose affect only that directory window.

When you choose this command, a dialog box appears, containing a text box for the names of the files to be displayed and three distinct sets of option buttons or check boxes that you can use to change display options. You can type specific filenames in the text box, or you can type filenames with wildcard characters in them, to display only filenames of a particular type. The default is *.* , which displays all files.

The buttons and boxes in the Include area determine which files and directories are displayed. The check boxes in the Display area determine how much information is displayed about each file and directory. The option buttons in the Sort By area determine whether the files and directories are sorted by name, extension, date and time, or size.

Dpath (Data Path)



dpath [; ! [drive:]path[; ...]]

Tells an application which directories besides the current directory it should search for data files (files with extensions other than .EXE, .COM, .BAT, or .CMD).

; When used alone (**dpath ;**), clears all data-path settings. You also use semicolons to separate multiple data paths.

path

Specifies the path of the directory that you want the application to search. You can specify more than one path, separating them by semicolons (;).

If you type **dpath** by itself, the command displays the current data path.

Each time you use the **dpath** command, the new data path you specify takes the place of the previous path. The data path is stored in the MS OS/2 environment. Only applications that are written to take advantage of **dpath** will use the data path specified.

The **dpath** command sets a data path for a single application's session. If you start a new command interpreter from within a session where **dpath** is defined, the new session inherits the **dpath** setting.

The **dpath** command works much the way the **path** command does, except that **dpath** is used by an application to search for data files, whereas **path** is used by commands and utilities outside of applications.

The **dpath** command achieves the same results in a full-screen OS/2 session as the **append** utility does in the DOS session.

Example To tell an application to search for data files in the SYMPHONY directory and the COUNTRY subdirectory of the BANDS directory on the current drive, and in the ROCK subdirectory of the BANDS directory on drive B, type the following:

```
dpath \symphony;\bands\country;b:\bands\rock
```

E (System Editor)



Provides editing functions that let you create and edit text files in MS OS/2.

For more information about the MS OS/2 System Editor, see "System Editor."

Echo



echo [**on** | **off**] *message*

Turns on or off the feature that displays batch-file commands on the screen while they are being processed, or simply displays the specified message on the screen. Although **echo** can be used from the command prompt, it is designed to be placed in a batch file.

message

Specifies a line of text to be displayed.

If you type **echo** by itself, the command displays its current setting.

Normally, commands in a batch file are displayed (“echoed”) on the screen when MS OS/2 receives them. You can turn off this feature by specifying **echo off** in the batch file; none of the subsequent lines are displayed on the screen until MS OS/2 encounters an **echo on** command. You can also turn off the echoing of any single command in a batch file, including the **echo off** command, by preceding the command with the **@** symbol.

You can display a message from a batch file (whether the echo feature is turned on or off) by specifying **echo message** in the file. If you want to display a message of more than one line, you must start each line with **echo**.

DOS
command

Works the same way in a DOS batch file (.BAT extension) as it does in an OS/2 batch file (.CMD extension).

Example To turn the echo feature off and then have a batch file display the message “This batch file formats and checks new disks.”, type the following in the batch file:

```
echo off
echo This batch file formats and checks
echo new disks.
```

Edlin

DOS

edlin [*drive:*][*path*] *filename*

Lets you create and edit text files.

filename

Specifies the name of the file you want to edit.

Edlin is a line-oriented text editor with a number of single-letter commands. Each line of text is preceded by a number, which you use

to reference that line in the text file. **Edlin** accepts up to 254 characters per line.

Once started, **edlin** displays an asterisk as a prompt. You type commands at the prompt to insert, delete, change, copy, or move lines within the file. If you are working in a file, you can return to the asterisk prompt by pressing CTRL+C. In addition to using the **edlin** commands, you can also use the MS OS/2 editing keys to edit individual lines.

You can use the following symbols to reference a line number or range of line numbers:

Symbol	Meaning
#	Specifies the line after the last line in the file.
.	Specifies the current line.
+ or -	Specifies a line relative to the current line; for example, +3 means three lines past the current line.

The following list summarizes the **edlin** commands:

Command	Purpose
<i>line</i>	Edits the line number or numbers specified.
a	Appends lines from disk to memory.
c	Copies lines.
d	Deletes lines.
e	Ends the editing session and saves edits.
i	Inserts lines of text.
L or l	Lists a range of lines.
m	Moves a range of text to a specified line.
p	Pages through a file 23 lines at a time.
q	Ends the editing session without saving the file.
r	Replaces text.
s	Searches for text.
t	Transfers the contents of another file into the file being edited.
w	Writes specified lines from memory to disk.

For details about using **edlin**, see your DOS manual.

Endlocal



endlocal

Restores the drive, directory, and environment settings that were in effect before the **setlocal** command changed them. You can use this command only in a batch file.

You can use multiple **setlocal** commands in a batch file without including corresponding **endlocal** commands; each succeeding **setlocal** overrides the previous one. If an **endlocal** command is not found in a batch file after the last **setlocal** command, the original drive, directory, and environment settings are restored when the batch file ends.

You can use this command only in OS/2 batch files (files with the extension .CMD).

Example If you want to use **setlocal** in a batch file to set an alternative search path for certain commands to use and then you want to reset the original path after those commands are finished, type the following in the batch file:

```
setlocal
path c:\test;a:\temp
.
.
endlocal
```

Erase

See **del**.

Exit



Closes and exits from the application. To continue without exiting, choose Resume.

Exit



exit

Ends the current command interpreter and returns control to the program from which it was started.

If you have used **cmd** to start another MS OS/2 command interpreter, **exit** ends that program and returns you to the parent command interpreter. If you type **exit** from the parent command interpreter, the full-screen OS/2 session ends.



Works the same way in the DOS session as described above, except that in the DOS session **exit** ends the current DOS command interpreter (**command**), unless it is the parent command interpreter. You cannot end the parent command interpreter.

Expand All



Expands all the branches of the directory tree completely, so that every level of subdirectories in every branch is displayed in the Directory Tree window.

Expand All can be chosen only if Show Outline Tree is active.

Expand Branch



Expands the selected branch of the directory tree completely, so that every level of subdirectories in that branch is displayed in the Directory Tree window.

Expand Branch can be chosen only if Show Outline Tree is active.

Expand One Level



Expands the selected branch of the directory tree by one level, so that the next-lower level of subdirectories in that branch is displayed in the Directory Tree window.

Expand One Level can be chosen only if Show Outline Tree is active.

EXTDSKDD.SYS



device=[drive:][path]extdiskdd.sys [/d:drive] [/t:tracks] [/s:sectors] [/h:heads] [/c] [/f:type]

Directs MS OS/2 to load the EXTDSKDD.SYS device driver. To use this command, place it in your CONFIG.SYS file.

When this driver is loaded, you can access a disk by using a logical drive letter. You can associate the letter with an external disk drive, or you can associate a second name (an alias) with an internal or external disk drive and copy to and from that same disk drive.

/d:drive

Specifies the physical drive number. The number must be in the range 0 to 255. The first physical floppy-disk drive (drive A) is drive 0; a second physical floppy-disk drive is drive 1; a third physical floppy-disk drive, which must be external, is drive 2.

/t:tracks

Specifies the number of tracks per side of a block device. The number must be in the range 1 to 999; the default is 80.

/s:sectors

Specifies the number of sectors per track. The number must be in the range 1 to 99; the default is 9.

/h:heads

Specifies the number of disk read/write heads. The number must be in the range 1 to 99; the default is 2.

/c

Indicates that change-line (doorlock) support is available for the drive.

/f:type

Specifies the type of drive. This value must be 0 (160/180K or 320/360K), 1 (1.2 megabyte), or 2 (720K, the default).

Examples To associate an alias with an internal 1.2-megabyte drive A, include the following line in your CONFIG.SYS file:

```
device=c:\os2\extdskdd.sys /d:0 /t:80 /s:15 /h:2 /c /f:1
```

If you want to copy from the external disk drive to that same external drive, include the following lines in your CONFIG.SYS file:

```
device=c:\os2\extdskdd.sys /d:2  
device=c:\os2\extdskdd.sys /d:2
```

The first line associates a drive letter with the external disk drive. The second line associates an additional drive letter (an alias) with that same external drive.

Extproc (External Batch Processor)



extproc [*drive:*][*path*]*filename* [*options*]

Defines an external batch processor for a batch file. You can use this command only in a batch file.

filename

Specifies the name of the file that contains the external batch processor. The filename must include the extension. You can also include a drive and a directory path, if necessary.

options

Specifies any valid options for the new batch processor.

By putting this command as the first line of your batch file, you tell MS OS/2 to start a different batch processor and use that to run the batch file.

You can use this command only in OS/2 batch files (files with the extension .CMD).

Example To run a batch file by using a batch processor called BORNE.EXE, which is in the BATCH directory on your hard disk (drive C), instead of by using **cmd**, type the following as the first line of your batch file:

```
extproc c:\batch\borne.exe
```

F1 (Key)

See Help (F1 Key).

Fcbs (File Control Blocks)



fcbs=x,y

Tells MS OS/2 how many file control blocks (FCBs) it can have open at one time and how many of those it cannot automatically close when too many FCBs are open. To use this command, place it in your CONFIG.SYS file.

- x* Specifies the maximum number of file control blocks that can be open at one time. This number must be in the range 1 to 255; the default is 16.
- y* Specifies the number of file control blocks that MS OS/2 cannot close automatically. This number must be in the range 0 to 255 and must be less than or equal to *x*; the default is 8.

If a program tries to open more than *x* files by using file control blocks, MS OS/2 closes one of the open files in order to make room for each new one. MS OS/2 tries to close the least recently used file first, but the **fcbs** command protects the first *y* files against being closed.

This command affects only the DOS Session.

File control blocks are an old method of managing files. You should use the **fcbs** command only if a DOS application requires you to do so.

Example To tell MS OS/2 that it can open only four files by using file control blocks and that it cannot close the first two of those files, include the following line in your CONFIG.SYS file:

```
fcbs=4,2
```

Fdisk (Fixed Disk)



fdisk

Prepares a hard disk for formatting.

The **fdisk** utility displays a series of menus to help you partition your hard disk for MS OS/2. With **fdisk**, you can do the following:

- Create a primary or extended MS OS/2 partition.
- Create a logical drive in the extended partition.
- Change the active partition.
- Delete an MS OS/2 partition.
- Delete a logical drive from the extended partition.
- Display partition data.
- Display information about a logical drive in the extended partition.
- Select the next fixed-disk (hard-disk) drive for partitioning if the system has multiple fixed disks.

For more information about this utility, see the *Microsoft Operating System/2 User's Guide*.

File Options



Sets options that determine whether the system displays warning messages before deleting or overwriting files and after creating new copies of files.

When you choose this command, a dialog box appears, containing four check boxes: Confirm On Delete, Confirm On Subtree Delete, Confirm On Replace, and Verify On Copy. These options have the following effects:

- When Confirm On Delete is turned on, MS OS/2 displays a dialog box asking you for confirmation before deleting a file or an empty directory.
- When Confirm On Subtree Delete is turned on, MS OS/2 displays a dialog box asking you for confirmation before deleting a directory that has files or subdirectories in it.

- When Confirm On Replace is turned on, MS OS/2 displays a dialog box asking you for confirmation before overwriting an existing file.
- When Verify On Copy is turned on, MS OS/2 compares the new and old copies after copying a file and displays a dialog box if the copies are not identical.

File System



Displays, organizes, and lets you work with directories and files on your computer. You can also run programs from File System by choosing the name of a file.

File System has six menus: File, Options, Tree, Arrange, Window, and Exit. These menus contain the following commands:

- The File menu contains the Open, Print, Associate, Move, Copy, Delete, Rename, Change Attributes, Create Directory, Select All, Deselect All, and Undo Selection commands.
- The Options menu contains the Display Options, Full File Details, File Options, and Minimize On Run commands.
- The Tree menu contains the Show Outline Tree, Expand One Level, Expand Branch, Expand All, and Collapse Branch commands.
- The Arrange menu contains the Cascade and Tile commands.
- The Window menu contains the Refresh, Close All Directories, and Directory Tree commands.
- The Exit menu contains the Exit File System and Resume commands.

For information about a specific File System command, see the individual entry for the command.

Find



find [/v] [/c] [/n] "string" [[drive:][path][filename] [...]]

Searches the file or files you specify, or the input you give it, for a specific string of text and displays all the instances of that string that it finds.

- /v** Displays all lines that do *not* contain *string*.
- /c** Displays only the total number of lines found.
- /n** Displays each line that contains *string*, with a number in front of it that indicates its position within the file.

string

Specifies the group of alphanumeric characters you want to search for. You must enclose the string in double quotation marks (" "). Since **find** is case-sensitive, you must type uppercase and lowercase letters exactly as you want the utility to search for them.

filename

Specifies the file in which to search for *string*. If the file is not in the current directory of the current drive, you must also specify a drive and/or path. You cannot use wildcard characters when specifying filenames, but you can specify several files with one **find** command. If you do not specify a filename, **find** searches standard input.

If you specify **/c** with **/v**, **find** displays the number of lines that do not contain *string*. If you specify **/c** with **/n**, **find** ignores **/n**.

DOS

Works the same way in the DOS session as described above, except that you cannot specify multiple filenames.

Example To search for the string "I told him no, but did he listen?" in the files CHAPTER1.DOC and CHAPTER2.DOC on drive A, and to display the lines that contain the string along with their relative line numbers, type the following on one line:

```
find /n "I told him no, but did he listen?"
a:\chapter1.doc a:\chapter2.doc
```

For

OS/2
cmd

for [%]%x in (item [...]) do command

Performs a command for a set of files or other items that you specify. Although **for** can be used from the command prompt, it is designed to be placed in a batch file.

%%x

Specifies the variable that will be affected by *command*. The values of *item* are substituted sequentially for this variable. You can use any single character for *x*.

item

Specifies a file or other item that you want to substitute for %%x so that *command* will affect it. You can specify multiple items, separated by spaces. These items are substituted sequentially for %%x. You can use wildcard characters in item names and you can use replaceable parameters as items.

command

Specifies the command you want to perform on the items you have specified. This can be any MS OS/2 command or utility. You can also include any valid arguments for the command or utility that you specify.

The **for** command substitutes the first item for the placeholder %%x and performs a command on that item; then **for** substitutes the second item for %%x and performs the command again; and so on until no items remain. For more information about replaceable parameters, see the *Microsoft Operating System/2 User's Guide*.

If you use **for** directly from the command line, use only one percent sign in front of x (%%x). In a batch file, however, you must use two percent signs, to distinguish this **for** variable from a replaceable parameter, which can be a number (%0-%9) or a string (%variable%).



Works the same way in a DOS batch file (.BAT extension) as it does in an OS/2 batch file (.CMD extension), except that *command* must be a DOS command or utility.

Example To delete in turn each of the three files REPORT, MEMO, and ADDRESS, type the following in a batch file:

```
for %%f in (report memo address) do del %%f
```

Format



format *drive*: [/4] [/t:tracks] [/n:sectors] [/v:label]

Prepares a disk so that it can store MS OS/2 files.

drive:

Specifies the drive that contains the disk you want to format. This information is required.

- /4** Formats a 5¼-inch double-sided disk in a high-density drive. If you are using a low-density drive, you may not be able to reliably read disks formatted with this option.

/t:tracks

Formats a 3½-inch disk to the number of tracks specified by *tracks*. The size of the specified drive determines the default value for *tracks*.

/n:sectors

Formats a 3½-inch disk to the number of sectors specified by *sectors*. The size of the specified drive determines the default value for *sectors*.

/v:label

Specifies the volume label, a name used by programs to identify the disk. The label can be up to 11 characters. If you do not specify this option, the **format** utility prompts you for a volume label after formatting is complete.

You must use this utility to format all new disks so that MS OS/2 can use them. The **format** utility creates the directory and the file allocation tables on the disk. **Format** uses the drive type to determine the default format for the disk.

You cannot format a disk that is in use.

Warning **Format** erases all information that is already on the disk, so be sure you specify the correct drive.

DOS

Works the same way in the DOS session as described above.

You cannot use **format** with drives that you have assigned, joined, or substituted by using the **assign**, **join**, or **subst** utility.

Example To format a floppy disk in drive A and give it the label OLDLETTERS, type the following:

```
format a: /v:oldletters
```

Full File Details



Displays full details of the files and directories in a directory window in File System.

If the Directory Tree window is the active window when you choose this command, the command affects the entire system. Otherwise, it affects only the directory window that is active when you choose the command.

Full file details include the size of the file, the date and time it was created, and any attributes that have been set for the file. When this command is not active, only the names of the files and directories are displayed.

Choosing this command turns the full file details on; choosing it again turns them off. When this command is in effect, a check mark appears next to the command name on the Options menu.

Goto



goto *label*

Directs MS OS/2 to go to a particular line in a batch file and continue processing commands from that point.

label

Specifies the location in the batch file where MS OS/2 should continue processing commands. *Label* can be any string you choose, but **goto** uses only the first eight valid characters to identify the label. Spaces, tabs, and certain common separators such as the equal sign (=) and the semicolon (;) are not valid characters in a label; it is best to use only letters and numbers.

The specified label should appear on a line by itself, preceded by a colon (:); this line is ignored in batch processing, except as a marker for the **goto** command. The label line can be either before or after the **goto** command in the file.

The **goto** command simply ignores invalid separators if they appear in the label line, but when it encounters a space or a tab, it stops reading the label. The following label lines, then, are equivalent:

```
:lab
:lab el
:--lab el
:==lab
==:;;lab el
```

DOS
command

Works the same way in a DOS batch file (.BAT extension) as it does in an MS OS/2 batch file (.CMD extension).

Example To format the disk in drive A and either go to the end of the file if no errors occur or display an error message if the formatting isn't completed successfully, type the following in a batch file:

```
@echo off
format a: /s
if errorlevel 0 goto end
echo An error occurred during formatting.
dir a:
:end
echo End of batch file.
```

Graftabl (Graphics Table)

DOS

graftabl [xxx] [?] [/status]

Loads the special graphics characters of an extended character set into memory so that your monitor can display these characters if you are using a display adapter in graphics mode.

- xxx** Specifies the code page that defines the extended character set. This must be a three-digit number from the list on the next page; the default is 437 (United States).
- ?** Displays the number of the active code page and a list of the available code pages.
- /status**
Displays the number of the active code page. You can abbreviate **/status** as **/sta**.

The following code pages can be loaded by using the **grftabl** utility:

Code	Character set
437	United States
860	Portuguese
863	French-Canadian
865	Nordic



Warning If you type **grftabl** by itself, the utility tells you which code page is active, but it also automatically loads the default code page (437). Therefore, if you have a different code page loaded, typing **grftabl** by itself will identify that code page but also change it.

Example To enable MS OS/2 to display the special graphics characters of the Portuguese extended character set, type the following:

```
grftabl 860
```

Help



Displays Help information about running a full-screen OS/2 application in a window. This command appears on the System menu only when you are running such an application.

Help



help [**on** | **off**] *messageid*

Displays Help information about MS OS/2 and about error or warning messages displayed in a full-screen OS/2 session or in the DOS session.

on Displays a Help line at the top of your screen. This line tells you how to get help and how to get back to Task Manager. This version of the **help** command replaces your current prompt setting with the Help line and the current drive letter.

off Removes the Help line from your screen.

messageid

Identifies the particular Help message that you want more information about. The message identification number consists of three letters—for example, SYS—followed by a four-digit number. You can also specify the number without the letters and leading zeroes (for example, SYS0002 can be specified as 2).

If you type **help** by itself, a list of Help options and information is displayed.

DOS

Works the same way in the DOS session as described above.

Example To get more information about the error message “SYS0002: File not found”, type the following:

```
help sys0002
```

MS OS/2 then displays the following information:

```
SYS0002: The system cannot find the file specified.  
Explanation: The filename is incorrect or  
does not exist. Action: Check the filename and  
retry the command.
```

Help (F1 Key)

Displays Help information for the Presentation Manager application you are running. When you press the F1 key, the displayed information refers to the part of the program you are working in.

This feature is available only in Presentation Manager applications. For help in a full-screen OS/2 session or the DOS session, use the **help** command.

Hold All Jobs



Temporarily stops all jobs currently in the queue from printing. If one of the jobs is already printing, it stops printing.

If you send new jobs to the printer after you have chosen this command, they will print.

Note that if your printer uses a print buffer, the contents of this buffer continue to be printed until the buffer is empty, even after you choose this command.

To release the held jobs so that they can print, use the Release All Jobs command.

Hold Job



Temporarily stops a job from printing. If the job is in the middle of printing, it stops printing.

Note that if your printer uses a print buffer, the contents of this buffer continue to be printed until the buffer is empty, even after you choose this command.

To release the job so that it can print, use the Release Job command.

Hold Queue



Temporarily changes a queue's status, so that the jobs waiting in that queue won't print. If one of the jobs is already printing, it finishes printing.

To release the queue so that the jobs in it can print, use the Release Queue command.

If

**if** [**not**] *condition command*

Carries out the given command only if the specified condition is met. If you include the word **not**, MS OS/2 carries out the command only if the condition is *not* met. Although **if** can be used from the command prompt, it is designed to be placed in a batch file.

condition

Specifies one of three conditions that determine whether MS OS/2 carries out the command:

errorlevel *number*

When a program finishes, it sends an exit code to MS OS/2. If the exit code returned by the last program you ran was greater than or equal to *number*, MS OS/2 carries out the command.

string1==string2

If the first string is exactly the same as the second string, MS OS/2 carries out the command. Uppercase or lowercase is significant. The strings must not include separators such as commas, semicolons, equal signs, and spaces.

exist [*drive:*][*path*] *filename*

If the filename exists in the specified directory, MS OS/2 carries out the command. You can specify a drive and a path before *filename*; otherwise, MS OS/2 looks for *filename* in the current directory.

command

Specifies the command to carry out if the given condition is met.



Works the same way in a DOS batch file (.BAT extension) as it does in an OS/2 batch file (.CMD extension).

Example To display the message “Can’t find data file” if the file BOOK.DAT does not exist in the current directory, type the following in a batch file:

```
if not exist book.dat echo Can't find data file
```

iopt (Input/Output Privilege)



iopt=yes | no | *program*[,...]

Specifies whether data input/output privilege may be given to a process that requests it in a full-screen OS/2 session. To use this command, place it in your CONFIG.SYS file.

yes Allows MS OS/2 to give input/output privilege to a process.

no Prevents MS OS/2 from giving input/output privilege to a process. This is the default.

program

Specifies a program that will be granted input/output privilege. You can specify more than one program, separating the names with commas.

Some MS OS/2 applications need to have direct access to hardware such as the display adapter. The **iopt** command tells MS OS/2 whether to give them that access.

You should use the **iopt** command only if an application requires you to do so.

This command has no effect on applications that are running in the DOS session.

Job Details



Displays information about the job you have selected from the printer queue and lets you change the priority of the job.

When you choose this command, a dialog box appears, showing you the following information:

- Name and identifying number of the job
- Date and time the job was created
- Job's priority in the queue
- Name of the printer driver and the port your printer is using
- Size of paper the document will be printed on
- Name of the queue processor
- Information about the parameters for the queue processor and the network

The job priority is a number in the range 1 to 99 (the lowest priority is 1; the highest priority is 99); you can change the priority by changing this number.

Join



join [[*drive1*: *drive2*:*path*] | [*drive1*: /*d*]]

Temporarily renames the disk in the first drive as a directory on the disk in the second drive. While a “join” is in effect, you cannot use the drive letter of the first drive to identify it.

drive1:

Specifies the drive you want to join to a directory on *drive2*.

Specifies the drive and path of the directory to which you want to join *drive1*. The directory must be a subdirectory of the root directory of *drive2*. If the directory already exists, it must be empty; if it does not exist, MS OS/2 creates it.

Deletes an existing joined directory. You must specify *drive1* to identify which "join" is to be deleted, but you must not specify *drive2:path* with the */d* option.

The entire directory structure of the disk in *drive1* appears to be in the directory you have specified on the disk in *drive2*.

The following utilities do not work on a drive that you have joined to a directory on another drive:

backup	format
chkdsk	label
diskcomp	recover
diskcopy	restore
fdisk	

If you type **join** by itself, the utility displays a list of the joined directories currently in effect.

Example To join drive B to the directory PROJECTS on drive A, type the following:

```
join b: a:\projects
```

Keyb (Keyboard)



keyb [*code* [*subcode*]]

Directs MS OS/2 to use a country-specific keyboard layout other than the United States layout.

code

Specifies the keyboard layout by country, using a two-letter code from the list on the next page.

subcode

Specifies a keyboard layout for countries that have more than one layout, using a three-digit subcode from the list below.

The following keyboard layouts are available:

Code	Keyboard	Subcode
BE	Belgium	120
CF	Canada-French	058
DK	Denmark	159
FR	France	189, 120
GR	Germany	129
IT	Italy	141, 142
LA	Latin America	171
NL	Netherlands	143
NO	Norway	155
PO	Portugal	163
SF	Switzerland-French	150F
SG	Switzerland-German	150G
SP	Spain	172
SU	Finland	153
SV	Sweden	153
UK	United Kingdom	166, 168
US	United States	103

Subcodes are associated only with enhanced keyboards. Because France, Italy, and the United Kingdom have more than one enhanced-keyboard layout available, MS OS/2 uses the subcode to identify the specific layout to use.

To use the **keyb** utility, you must have a **devinfo** command for your keyboard in your CONFIG.SYS file. For more information, see the **devinfo** command.

This utility affects all programs that you run and all sessions.

If you type **keyb** by itself, the utility displays the current code-page setting.

Examples To use a German keyboard layout, type the following:

```
keyb gr
```

To return to using the US keyboard layout, type the following:

```
keyb us
```

Label



label [*drive*][:*label*]

Assigns a disk a new volume label.

drive:

Specifies the drive that contains the disk to which you want to give a new label.

label

Specifies a new volume label for the disk in the specified drive. The label may be up to 11 characters, including spaces. Do not use any of the following characters in a volume label:

* ? / \ | . , ; : + = < > [] () & ^

If you do not specify a drive, MS OS/2 assigns *label* to the disk in the current drive.

This label, which is simply a name for the disk, is used by programs to identify the disk and is displayed when you use the **dir** command to get information about a disk's contents.

If you type **label** by itself, the utility displays the label of the disk in the current drive and prompts you to either type a new volume label or press ENTER to retain the current label.



Works the same in the DOS session as described above.

Do not use **label** on drives that you have assigned, joined, or substituted by using the **assign**, **join**, or **subst** utility.

Example To give the label OLD STUFF to the disk in drive A, type the following:

```
label a:old stuff
```

Large Font



Changes the size of the letters used to display text in an OS/2 application running in a window, so that fewer lines will fit on the screen. The width of the letters doesn't change, but they become taller.

When you enlarge the window to its maximum size, the maximum number of lines displayed remains the same whether you are using the smaller or larger font size. This is because the window itself changes size when you change the font size (that is, a maximized window with the small font is smaller than one with the large font).

This command reverses the effect of the Small Font command. When the letters on the screen are in the larger font size, this command appears as Small Font on the menu.

Libpath (Library Path)



libpath=[drive:]path[;[drive:]path][...]

Tells MS OS/2 what directories to search for dynamic-link libraries. To use this command, place it in your CONFIG.SYS file.

drive:

Specifies the drive where dynamic-link libraries are located. If you do not specify a drive, MS OS/2 searches the disk in the current drive.

path

Specifies the directory to search for dynamic-link libraries. You can specify more than one directory, separating the names with semicolons (;).

MS OS/2 does not automatically search the current directory for dynamic-link libraries; you can specify the current directory by substituting a period (.) for the first *drive:path* argument.

Example To tell MS OS/2 to look for dynamic-link libraries in the current directory and in the directory DYNLIB on your hard disk (drive C), include the following line in your CONFIG.SYS file:

```
libpath=.;c:\dynlib
```

Logo Display



Changes the length of time an application's logo is displayed.

When you choose this command, a dialog box with three option buttons appears, offering you a choice of display times: Indefinite (until you turn it off), None (no logo is displayed), and Timed (you specify a time, in milliseconds).

Main Group



Switches you to the primary group of programs in Start Programs.

Every group that currently exists in Start Programs is listed on the Group menu; the Main Group is always listed first, and the name of the group that is currently displayed has a check mark next to it. (If there are more than eight groups, the ninth name listed is More; if you choose More, a dialog box appears, listing all the current program groups in alphabetical order.) To display the names of the programs in the Main Group if they are not currently displayed, choose Main Group from the menu.

Maximize



Enlarges a window to its maximum size.

The maximum size depends on the application; for most Presentation Manager applications it is the entire screen, but for some applications it may be smaller.

If the application is already enlarged to its maximum size, this command is inactive.

This command is not on the System menu of the Control Panel application.

Maxwait (Maximum Wait)



maxwait=x

Sets the maximum time a process must wait before MS OS/2 increases its priority. To use this command, place it in your CONFIG.SYS file.

- x** Specifies the number of seconds a process must wait before it is given a higher priority. This number must be in the range 1 to 255; the default is 3.

A process is allocated time to run by the MS OS/2 scheduler. When an active process is unable to run for the number of seconds specified by **maxwait**, the process receives a temporary increase in priority for one execution cycle (time slice). See the **timeslice** command for more information about time slices.

The **maxwait** command has no effect if the **priority** command is set to **absolute**.

Example To tell MS OS/2 to give priority to processes after they have waited two seconds, include the following line in your CONFIG.SYS file:

```
maxwait=2
```

Memman (Memory Management)



memman=[swap | noswap][,move | nomove]

Specifies whether MS OS/2 can swap memory segments between memory and disk and whether it can temporarily move segments. To use this command, place it in your CONFIG.SYS file.

swap

Allows swapping of segments.

noswap

Prevents swapping of segments.

move

Allows moving of segments.

nomove

Prevents moving of segments.

If you are setting only **move** or **nomove**, you must still include the comma.

MS OS/2 places a **memman** command in your CONFIG.SYS file during the installation process. If you start MS OS/2 from a hard disk, the default is **memman=swap,move**; if you start from a floppy disk, the default is **memman=noswap,move**.

If you allow swapping, then moving is allowed too, but the reverse is not automatically true.

For a discussion of swapping and moving memory segments, see the *Microsoft Operating System/2 User's Guide*.

Example To prevent MS OS/2 from swapping or moving data segments while you are running a time-dependent application, include the following line in your CONFIG.SYS file:

```
memman=noswap,nomove
```

Minimize



Shrinks a window and turns it into an icon. The application is still running but now takes up the smallest space possible on the screen.

If the application is already an icon, the Minimize command is inactive.

Minimize After Use



Shrinks Task Manager to an icon when you switch to another application. When you exit from the application, the Task Manager window reappears.

If this command is not in effect, the Task Manager window stays on the screen when you switch to another application.

Once you have chosen this command, it remains in effect until you choose it again. While the command is in effect, a check mark appears next to the command name on the menu.

Minimize On Run



Shrinks File System to an icon when you run an application from File System. When you exit from the application, the File System window reappears.

If this command is not in effect, the File System window stays on the screen when you switch to another application.

Once you have chosen this command, it remains in effect until you choose it again. While the command is in effect, a check mark appears next to the command name on the menu.



Shrinks Start Programs to an icon when you start an application.

If this command is not in effect, the Start Programs window stays on the screen when you start an application.

Once you have chosen this command, it remains in effect until you choose it again. While the command is in effect, a check mark appears next to the command name on the menu.

Mkdir (Make Directory)



mkdir [*drive:*][*path*]*directoryname* [[*drive:*][*path*]*directoryname* [...]]

Creates a directory. You can abbreviate **mkdir** as **md**.

directoryname

Specifies the name of the new directory. Unless you specify a different drive and path, **mkdir** creates the new directory as a sub-directory of the current directory.

You can create more than one directory at a time by typing multiple directory names. Each directory for which you do not specifically indicate a drive and path will be created as a subdirectory of your current directory.

DOS

command

Works the same way in the DOS session as described above, except that in the DOS session you cannot specify multiple directory names.

Example To create the directory CLIENT, and the subdirectory PETE under it, on drive A, type the following:

```
mkdir a:\client a:\client\pete
```

Mode

Sets operating parameters for communication and output devices that you may connect to or add to your computer. These devices include parallel and serial printers, modems, and screens. The **mode** utility lets you change settings by using a command line instead of physically setting switches in your computer.

The **mode** utility has several discrete purposes. The following sections explain the different ways in which you can use **mode**.

Mode: Configuring a Parallel Printer

OS/2

```
mode LPTn[:] [chars][,lines],p
```

Controls the line and character spacing of the output on a parallel printer.

n Specifies the number of the parallel port the printer is connected to. This number can be 1, 2, or 3; the default is 1. (You can use PRN in place of LPT1; they are equivalent.) The colon is optional. You must specify a printer port.

chars

Specifies the number of characters per line. This number can be either 80 or 132; the default is 80. If you enter nothing for this parameter, **mode** does not change the current number of characters per line.

lines

Specifies vertical spacing, the number of lines per inch. This number can be either 6 or 8; the default is 6. If you enter nothing

for this parameter, **mode** does not change the current vertical spacing. You must type the comma before *lines*, even if you did not specify a new value for *chars*.

- p** Turns on “infinite retry,” which tells mode to keep trying to send output to the printer if a time-out error occurs. This option causes part of the **mode** utility to remain resident in memory. You must type both commas before **p**, even if you did not specify new values for *chars* and *lines*. If you do not specify this option, infinite retry is turned off.

If your system gets stuck in a time-out loop, where **mode** keeps trying to send output to the printer but cannot succeed, you can exit from the loop by pressing CTRL+C.



Works the same way in the DOS session as described above.

Example To tell the printer connected to your computer’s second parallel-printer port (LPT2) to print at 80 characters per line and 8 lines per inch, type the following:

```
mode lpt2 80,8
```

Mode: Configuring a Serial Port



```
mode COMm[:] [baud[,parity][,databits][,stopbits]]
[,to=state][,xon=state][,idsr=state][,odsr=state]
[,octs=state][,dtr=state][,rts=state]
```

Sets the parameters for communication with a serial printer or other device that uses a serial port. This is the port you would use for asynchronous communication.

- m** Specifies the number of the serial port you want to use. This number can be 1, 2, or 3; the default is 1. The colon is optional.

If you omit any of the following four arguments, **mode** uses the most recent settings. The **mode** utility recognizes these arguments by their positions, so if you leave out an argument, you must still type the comma that precedes the next one.

baud

Specifies the first two digits of the transmission rate in bits per second: 110, 150, 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, 9600, or 19200. This argument is required, except when you are merely checking the current settings.

parity

Specifies how the system uses the parity bit to check for errors in transmission. The possible values are N (no parity), O (odd parity), E (even parity), M (mark; parity bit always 1), and S (space; parity bit always zero); the default is E.

databits

Specifies the number of data bits in a character. This number can be 5, 6, 7, or 8; the default is 7.

stopbits

Specifies the number of stop bits that define the end of a character. This number can be 1, 1.5, or 2. If the baud rate is 110, the default for *stopbits* is 2; otherwise, the default is 1. If you specify 1.5 for *stopbits*, you must specify 5 for *databits*.

You may list the following options in any order after the *stopbits* argument, separating them with commas. The default settings listed for these options apply only when you first start your computer; thereafter, the default setting for an option is its previous setting.

to=on | off

Specifies whether infinite time-out processing is enabled (**on**) or disabled (**off**). The default is **on**.

xon=on | off

Specifies whether the XON/XOFF protocol for data-flow control is enabled (**on**) or disabled (**off**). The default is **off**.

idsr=on | off

Specifies whether input handshaking that uses the DSR (Data Set Ready) circuit is enabled (**on**) or disabled (**off**). The default is **on**.

odsr=on | off

Specifies whether output handshaking that uses the DSR (Data Set Ready) circuit is enabled (**on**) or disabled (**off**). The default is **on**.

octs=on | off

Specifies whether output handshaking that uses the CTS (Clear to Send) circuit is enabled (**on**) or disabled (**off**). The default is **on**.

dtr=on | off | hs

Specifies whether the DTR (Data Terminal Ready) circuit is enabled (**on**) or disabled (**off**), or whether DTR handshaking is enabled (**hs**). The default is **on**.

rts=on | off | hs | tog

Specifies whether the RTS (Request to Send) circuit is enabled (**on**) or disabled (**off**), whether RTS handshaking is enabled (**hs**), or whether RTS toggling is enabled (**tog**). The default is **on**.

If you type **mode COMn** by itself, the utility displays the current setting for the specified serial port.

DOS

Works the same way in the DOS session as described above, except that you cannot use the options **to=state**, **xon=state**, **idsr=state**, **odsr=state**, **octs=state**, **dtr=state**, or **rts=state**, and there is an additional option, **p**.

- p** Specifies a time-out value of about thirty seconds for DOS programs that directly control the hardware. You must use the **setcom40** utility to tell the program the address of the serial port before you use the port. The **p** option must always be last on the command line.

Some programs require the additional information that you can specify with the MS OS/2 version of the **mode** utility. If you are going to use one of those programs, you must configure your serial port from a full-screen OS/2 session, not the DOS session.

Example To set the baud rate to 300, set the parity to odd, leave the number of data bits set to 7, and set the number of stop bits to 2, for your computer's first serial port, type the following:

```
mode com1: 300,o,,2
```

Mode: Setting Up the Display

OS/2

mode display[,rows]

Sets the way text is displayed on your screen, including the number of characters per line, the number of lines per screen, and whether the text is in color.

display

Specifies the kind of display adapter you are using: 40, 80, BW40, BW80, CO40, CO80, or MONO. For each of these options, 40 and 80 indicate the number of characters per line. BW means that color has been disabled even though you have a color graphics adapter; CO means that color has been enabled. MONO specifies a monochrome display adapter, which always has 80 characters per line.

rows

Specifies the number of rows (lines) on the screen: 25, 43, or 50. Which of these are valid depends on the kind of display adapter you have. The default when you first start your computer is 25; thereafter, the previous setting is the default.

When you use **mode** to change the display, it affects only the current session.

DOS

Works the same way in the DOS session as described above.

Example To set a display so that it uses color, 80 characters per line, and 43 lines per screen (assuming the display adapter can handle such settings), type the following:

```
mode co80,43
```

Mode: Setting Floppy-Disk Verify Capability
OS/2

```
mode dskt [ver=on| off]
```

Specifies whether MS OS/2 should verify that data is correctly written to a floppy disk. The default is **ver=off**.

If you type **mode dskt** by itself, the utility displays the current setting.

DOS

Works the same way in the DOS session as described above.

More



more < *source*

Reads from standard input and displays what it reads, one screenful at a time. After each screenful, **more** prompts you to press a key in order to display the next screenful.

source

Specifies the source of the input. You can redirect input from a file or an MS OS/2 command or utility. For more information about redirection, see the *Microsoft Operating System/2 User's Guide*.

You can use **more** to view the contents of a long file or the results of a command screenful by screenful.



Works the same way in the DOS session as described above, except that in the DOS session **more** creates temporary files in which to store information until it is displayed. For this reason, you cannot use the DOS version of **more** if the current disk is full or write-protected.

Examples To view the contents of the file IDEAS.OLD one screenful at a time, type the following:

```
more < ideas.old
```

To sort the file IDEAS.OLD alphabetically and view the output one screenful at a time, type the following:

```
sort < ideas.old | more
```

Mouse



Changes the active button on your mouse.

When you choose this command, a dialog box appears, containing a check box that you can select in order to swap the left and right mouse buttons.

MOUSExxx.SYS



device=[drive:][path]mousexxx.sys [**mode**=mode] [**qsize**=size]
[**serial**=device] [**model**=style]

Directs MS OS/2 to load the specified mouse device driver. To use this command, place it in your CONFIG.SYS file.

When the mouse driver and the POINTDD.SYS device driver are loaded, you can use a pointing device with DOS and MS OS/2 programs that support such devices.

xxx Specifies the type of mouse you are using. Possible values for **xxx** are included in the list on the next page.

mode=mode

Specifies whether you'll be using the mouse in an OS/2 session, the DOS session, or both sessions. Acceptable values for *mode* are **p** (protected mode, OS/2 session), **r** (real mode, DOS session), and **b** (both); the default is **b**.

qsize=size

Specifies the size, in bytes, of the queue buffer to be allocated for each MS OS/2 session. The number must be in the range 1 to 100; the default is 10.

serial=device

Specifies the communications port to which the mouse is connected. Acceptable values are COM1 and COM2 for IBM PC/AT and compatible computers, and COM1 through COM8 for IBM PS/2 computers. The default value is COM1 for a serial mouse. This option is not used with a parallel mouse.

model=style

Specifies the model of Microsoft mouse you are using. Acceptable values are 099 (mouse with green buttons) and 199 (mouse with gray buttons or serial mouse with white buttons).

To set up a mouse device driver, you must first choose the driver that matches your mouse hardware and your computer. The following list tells you which driver to use with your mouse:

Driver	Mouse
MOUSEA00.SYS	Mouse Systems Mouse
MOUSEA01.SYS	Visi-On Mouse
MOUSEA02.SYS	Microsoft Serial Mouse for IBM Personal Computers (models 039-099 and 039-199)
MOUSEA03.SYS	Microsoft Bus (parallel) Mouse for IBM Personal Computers (models 037-099 and 037-199)
MOUSEA04.SYS	Microsoft InPort (parallel) Mouse for IBM Personal Computers
MOUSEA05.SYS	IBM Personal System/2 Mouse for IBM PC/AT and compatible computers
MOUSEB00.SYS	Mouse Systems Mouse
MOUSEB01.SYS	Visi-On Mouse
MOUSEB02.SYS	Microsoft Serial Mouse for IBM Personal Computers (models 039-099 and 039-199)
MOUSEB05.SYS	IBM Personal System/2 Mouse for Models 50, 60, 70, and 80

Note MOUSEAxx.SYS drivers are used with IBM PC/AT or compatible computers. MOUSEBxx.SYS drivers are used with IBM Personal System/2 computers.

Regardless of which mouse driver you choose, you must always set up the POINTDD.SYS device driver for the mouse pointer.

If you are using a serial mouse, the **device=mousexxx.sys** command must precede any **device=com0x.sys** commands in your CONFIG.SYS file.

Move



Moves a file, a group of files, a directory, or a group of directories from one directory to another.

When you choose this command, a dialog box appears, containing two text boxes: From and To. The From text box shows the names of the files or directories you have selected from the directory window. In the

To text box, you can type the drive and path of the destination directory (the directory you want to move your files or directory to). You don't need to type the drive letter unless you are moving to a different drive.

If you are moving only one file or directory, you can move it and rename it at the same time by typing a new name in the To text box. If you rename a directory, it will show a new date and time of creation when you display full file details; otherwise, the date and time will stay the same.

You can move multiple files or multiple directories (or even files and directories together) by extending the selection in the directory window before you choose Move, or by typing multiple names in the From text box. You can also move multiple files with similar filenames by using wildcard characters.

MS OS/2 does not recognize multiple destination names; it ignores all but the first name in the To text box.

Warning If you are moving a single file and you supply a destination filename that already exists, MS OS/2 will overwrite the file. (If you have turned on the Confirm On Replace option by using the File Options command, MS OS/2 will first display a dialog box asking whether you want to overwrite the file.)

If you want to move multiple files, do not specify a destination filename. If you do, MS OS/2 will move the first source file and give it the destination filename; then move the second source file, give it the destination filename, and overwrite the first file; and so on until all the files have been moved. The result is one file, and its contents will be the contents of the last source file. The other source files will be lost.

If you are moving multiple directories and you supply a destination directory name, MS OS/2 will move the first source directory and give it the destination name, then move the remaining source directories into the first as subdirectories.



Lets you move a window.

When you choose this command, you can use the **DIRECTION** keys to move the window to a new position on the screen. Press **ENTER** to fix the window in its new position, or press **ESC** to return the window to its old position.

Next Window



Switches to the next open application window. This is the last application window you used before switching to or starting the current application window.

This command appears on the System menu only for full-screen OS/2 applications running in a window.

Open



Opens a directory window in File System, starts a program, or starts a program and opens a data file for that program.

If you have selected a directory name in File System, choosing Open creates a directory window that lists the files and subdirectories in the selected directory.

If you have selected the name of a program, choosing Open starts the program.

If you have selected the name of a data file that has been associated with a program by using the Associate command, choosing Open starts the program and opens the selected file.

Note You cannot start a DOS program or open a DOS data file from File System; you must switch to the DOS session first and then type the name of the program, or the command that starts the program, at the DOS prompt.

Patch



patch [*drive:*][*path*]filename [**/a**]

Inserts a section of program code into an existing MS OS/2 program or application to change the way the program runs. Any file that can be written to can be patched.

filename

Specifies the file to patch.

/a Specifies the automatic operation mode. With the **/a** option, *filename* is a file containing instructions for patching one or more files automatically.

Patch has two modes of operation: automatic and interactive. Interactive mode is the default. In this mode, you supply the path of the file you want to patch in the **patch** command line. **Patch** then prompts you for the offset at which a patch is to be made (**patch** can change bytes at any position in a file or add bytes to the end of a file) and for the patch contents. You must type both the offset and the patch contents in hexadecimal notation.

After you supply the hexadecimal offset, **patch** displays the 16 bytes at that offset. You can then change any or all of the 16 bytes. If you decide not to make any changes, you can press the ESC key.

The cursor is initially positioned on the first byte. To change this byte, type one or two hexadecimal digits. To leave the byte unchanged and move to the next byte, press the SPACEBAR. Press the BACKSPACE key to move the cursor back if you make a mistake. If you move the cursor past the last byte displayed, **patch** displays the next 16 bytes. This cycle continues until you press the ENTER key.

When you press ENTER, **patch** saves the patch information and asks if you want to make any more patches. If you respond with "Y", **patch** again prompts you for an offset. After you have entered all the patches you want to make and responded with "N" at the "more patches" prompt, **patch** displays the patches on the screen and asks if they should be applied. If you respond with "Y", all of the saved patch requests are written to disk in the same order in which they were entered.



Works the same way in the DOS session as described above.

Warning You should use **patch** only if you understand the need for a patch, how to make the patch, and the effect the patch will have on program operation. Before you use the **patch** utility, be sure to make backup copies of the files to which the patches will be applied.

Path



path [**;** | [**drive:**] **path** [**;**...]]

Tells MS OS/2 where to search for a command file or application if the program is not in the current directory.

; When used alone (**path ;**), clears all search-path settings. You also use semicolons to separate multiple paths.

path Specifies the **path** of the directory that you want MS OS/2 to search for command files. If you do not specify a drive, MS OS/2 searches the disk in the current drive.

If you type **path** by itself, the command displays the current search path.

The **path** command affects only the current session. To set a path for all sessions, you must place the **path** command in your CONFIG.SYS file. For more information on using **path** in your CONFIG.SYS file, see the **set** command.



Works the same way in the DOS session as described above.

Example To tell MS OS/2 to search for a command file in the directories BIN and WORD on drive C and the subdirectory WORD of the APPS directory on drive A, type the following:

```
path c:\bin;c:\word;a:\apps\word
```

Pause



pause [*comment*]

Suspends processing of a batch file and displays a message that asks the user to press any key to continue.

comment

Specifies the message you want to have appear before the line "Press any key when ready...". The message can be any combination of up to 121 characters.

You can use this command to make a batch program pause any time the user has to do something, such as read a message or insert a disk, before continuing with the program.



Works the same way in a DOS batch file (.BAT extension) as it does in an OS/2 batch file (.CMD extension).

Example To have your batch program pause and prompt the user to insert a new disk in drive A before continuing, type the following at the appropriate point in the batch file:

```
pause Please put a new disk into drive A.
```

Pauseonerror



pauseonerror=yes | no

Tells MS OS/2 whether to pause if it encounters an error while processing your CONFIG.SYS file during system start-up. To use this command, place it in your CONFIG.SYS file.

If **pauseonerror** is set to **yes** (the default), then whenever MS OS/2 encounters an error while processing your CONFIG.SYS file, it stops, displays an error message, and prompts you to press ENTER to continue the start-up process. If you have set **pauseonerror** to **no**, MS OS/2 displays an error message when it encounters an error, but it does not stop.

Example To tell MS OS/2 to process your CONFIG.SYS file without pausing when it encounters errors, include the following line in your CONFIG.SYS file:

```
pauseonerror=no
```

PMSHELL.EXE



pmshell.exe filename1.ini filename2.exe

Specifies the initialization file and the command interpreter to be used by the Presentation Manager user interface (PMSHELL.EXE).

filename1

Names the MS OS/2 initialization file to be used.

filename2

Names the command interpreter to be used.

During MS OS/2 installation, the following line is placed in your CONFIG.SYS file:

```
protshell=c:\os2\pmshell.exe c:\os2\os2.ini c:\os2\cmd.exe
```

If you place your initialization file or command interpreter somewhere other than the OS2 directory on drive C, you need to tell MS OS/2 where it is by changing its path in the **protshell** command line in your CONFIG.SYS file.

Example To tell MS OS/2 that your initialization file and command interpreter are located in the root directory on drive D, change the **protshell** command to read as follows:

```
protshell=d:\pmshell.exe d:\os2.ini d:\cmd.exe
```

POINTDD.SYS



device=[drive:][path]pointdd.sys

Directs MS OS/2 to load the POINTDD.SYS device driver. To use this command, place it in your CONFIG.SYS file.

To use a mouse with MS OS/2, you must set up the POINTDD.SYS driver as well as the MOUSExxx.SYS driver. The POINTDD.SYS driver provides information that MS OS/2 needs in order to draw the mouse pointer.

Example To use a Microsoft InPort Mouse, you must include the following two lines in your CONFIG.SYS file:

```
device=c:\os2\pointdd.sys
device=c:\os2\mousea04.sys
```

Print



Prints a file.

When you select a filename from File System and then choose this command, MS OS/2 sends the file to the default printer. To choose a different printer, you must change the default printer. For information on changing the default printer, see the Printer Defaults command.

Print



print [/d:device] [/b] [drive:][path]filename [...]

or

print [/d:device] [/t| /c]

Sends a file to a device to be printed.

/d:device

Tells MS OS/2 which printer to use. The default is LPT1.

- /b* Tells MS OS/2 not to interpret CTRL+Z characters in the file as end-of-file characters.

filename

Tells MS OS/2 which file to print. If you specify more than one file, the files are printed in the order you type them in the command line.

- /t* Stops all printing and removes all files from the print queue, if the spooler is active for the specified device.
- /c* Stops printing the file being printed and removes it from the print queue, if the spooler is active for the specified device.

DOS

Works the same way in the DOS session as described above, except that you cannot use the */t* and */c* options.

Example To print the file PENCIL.TST on the printer connected to your computer's third parallel port (LPT3), type the following:

```
print /d:lpt3 pencil.tst
```

Print Job Next



Changes the priority of a job so that it is the next job to print.

This command causes the print job selected to be moved to the top of the list of waiting print jobs. If another job is already printing, the selected job starts printing as soon as the other job finishes.

You can also change the priority of a print job by selecting the Job Details command on the Job menu.

Printer Connections



Associates printers, ports, and printer drivers, and sets parameters or chooses options for them.

When you choose this command, a dialog box with lists of printer names and port names appears. You can associate a printer with a port by selecting a printer name from the first list and a port name from the second list.

The dialog box also contains command buttons labeled Names, Drivers, Setup, and Comms. When you choose any of these buttons, further dialog boxes appear. Choose the Names command button to associate a printer driver with a particular printer, add or change the name of a printer, and specify network options. Choose the Drivers command button to select a default printer driver. Choose the Setup command button to set printer-driver options. Choose the Comms command button to set parameters for a communications port.

Printer Defaults



Selects a default printer for the system and sets the values for printer time-outs.

When you choose this command, a dialog box appears, containing a list box from which you can select the name of the printer you want to make the default printer (the printer to which applications and other programs in your system send files you ask them to print).

The dialog box also contains text boxes in which you can change the length of time (in seconds) for the printer time-outs. The printer time-outs tell your system how long to keep trying to send a file to a printer and how long to wait before trying again if the file did not print the first time.

Priority



priority=absolute | dynamic

Determines how a process receives enough priority over other processes to run. To use this command, place it in your CONFIG.SYS file.

In MS OS/2, processes have three priority classes: time-critical, normal, and idle-time. Each of these classes has 32 priority levels, which MS OS/2 uses to schedule processes. In the normal class, MS OS/2 may adjust the priority level dynamically (that is, according to changing circumstances).

absolute

Prevents the system from dynamically changing the priority of processes in the normal class. The **absolute** setting gives all processes that are running an equal share of central-processing-unit (CPU) time.

dynamic

Instructs MS OS/2 to try to determine which process needs CPU resources most in any given interval of time (time slice). The **dynamic** setting gives more CPU time to the process that is running in the foreground. This is the default setting. For more information about time slices, see the **timeslice** command.

You should use the **priority** command only if an application requires you to do so.

Prompt



prompt [string]

Changes the prompt for the current MS OS/2 command interpreter. This change affects only the current session.

string

Specifies the new prompt. You can specify any character string you want, or you can use any of the **\$x** character combinations

listed below to customize your prompt. (You can combine text and these character combinations in any order.) Any spaces that you type will appear as part of the prompt.

The following character combinations are available for use in customizing your prompt:

Combination	Action
\$	Displays the dollar-sign character (\$).
_	Begins a new line on the screen.
\$a	Displays an ampersand (&).
\$b	Displays the pipe symbol (|).
\$c	Displays a left parenthesis [(].
\$d	Displays the current date.
\$e	Specifies the beginning of an ANSI escape code.
\$f	Displays a right parenthesis [)].
\$g	Displays the greater-than sign (>).
\$h	Represents the backspace character; this erases the previous character from the prompt.
\$i	Displays the Help line.
\$l	Displays the less-than sign (<).
\$n	Displays the current drive letter.
\$p	Displays the current drive letter and directory path.
\$q	Displays the equal sign (=).
\$t	Displays the current time.
\$v	Displays the MS OS/2 version number.

If you type **prompt** by itself, the command resets the prompt to the system default, which displays only the current drive and directory, in brackets.



Works the same way in the DOS session as described above, except that you cannot use **\$a**, **\$c**, and **\$f**.

Example To change your prompt so that it tells you the time on one line and the current drive and directory on the next, followed by a space and a greater-than sign, type the following:

```
prompt The time is $t$h$h$h$h$h$h$h$h$h$h$ _$p $g
```

The new prompt has the following form:

```
The time is 13:37  
C:\OS2 >
```

Notice that the **\$h** characters erased the seconds and hundredths of seconds from the time display.

Protectonly



protectonly=yes | no

Tells MS OS/2 whether to enable the DOS session. To use this command, place it in your CONFIG.SYS file.

During MS OS/2 installation, the **protectonly=no** command is placed in your CONFIG.SYS file so that you can run the DOS session. To set up your system to run the Presentation Manager and full-screen OS/2 sessions only, change this line to **protectonly=yes**.

Protshell (Protected Shell)



protshell=[drive:][path]filename [arguments]

Tells MS OS/2 what user interface to use and which command interpreter to use in a full-screen OS/2 session.

filename

Specifies the file that contains the user interface. If this file is not in the root directory of the start-up drive, you must include the drive and/or path.

arguments

Specifies the drive, path, and filename of the MS OS/2 initialization file and command interpreter. For more information about these arguments, see the entry for PMSHELL.EXE.

The following line is placed in your CONFIG.SYS file during MS OS/2 installation:

```
protshell=c:\os2\pmshell.exe c:\os2\os2.ini c:\os2\cmd.exe
```

This command tells MS OS/2 to use the Presentation Manager user interface and the **cmd** command interpreter in full-screen OS/2 sessions.

This command has no effect on the DOS session.



Queue Connections



Associates a print queue with a printer and sets the default queue for a printer.

When you choose this command, a dialog box appears, containing lists of available printers and available queues and a text box with the name of the current default queue. You can associate a queue with a printer by selecting a printer name from the first list and a queue name from the second list. The last queue name you select appears in the Default text box; to change this setting, select another name from the queue list.

Recover



recover [*drive:*]! [*drive:*][*path*] *filename*

Reconstructs all the files from a disk that has a damaged directory structure or reconstructs a single file from a disk that has bad sectors.

drive:

Specifies the drive containing the disk with the files you want to try to reconstruct. If you specify only a drive, **recover** tries to reconstruct the entire contents of the disk in that drive.

filename

Specifies the file you want to try to reconstruct. If you do not specify a drive or path, **recover** assumes that the file is in the current directory on the current drive. You cannot use wildcard characters in *filename*.

If you type **recover** by itself, the utility tries to reconstruct all the files in the current directory on the current drive.

Warning Before you use this utility, be sure you have a full backup of all the files on your disk and then try to restore your files with the **restore** utility. If this fails, use the **recover** utility to try to reconstruct the lost files one by one. Do not use **recover** to reconstruct an entire disk unless the entire disk is unreadable.

MS OS/2 recovers a file by reading it, sector by sector, skipping the bad sectors.

DOS

Works the same way in the DOS session as described above.

You cannot use **recover** with drives that you have assigned, joined, or substituted by using the **assign**, **join**, or **subst** utility.

Example To try to reconstruct the file REPORT.TXT from the disk in drive B that has bad sectors, type the following:

```
recover b:\report.txt
```

Refresh



Updates the information in all the directory windows in File System.

This command takes effect immediately.



Updates the list of queues and jobs shown by the Spooler Queue Manager.

This command takes effect immediately.

To tell the system to update the list every time it changes, use the Auto Refresh command.

Release All Jobs



Restores the priority of all the jobs that have been held in a print queue, so that they can print. If one of the jobs was printing when all the jobs were held, it starts printing again.

This command reverses the effect of the Hold All Jobs command.

Release Job



Restores the priority of a print job that has been held, so that the job can print. If the job was printing when it was held, it starts printing again.

This command reverses the effect of the Hold Job command.

Release Queue



Restores the status of a queue that has been held, so that the jobs in that queue can print.

This command reverses the effect of the Hold Queue command.

Rem (Remark)



rem [*comment*]

Displays a message while a batch file is running or includes a descriptive comment in the batch file.

comment

Specifies the message you want to put in the batch file. *Comment* can be any combination of characters that fits on one line.

If **echo** is on when MS OS/2 encounters a **rem** line, the line is displayed; if **echo** is off, the line is not displayed.

If the comment you want to put in the batch file is too long to fit on one line, you must use **rem** again for each line in the comment. You can also use **rem** without *comment* to add spacing between blocks of comments or remarks.



Works the same way in a DOS batch file (.BAT extension) as it does in an OS/2 batch file (.CMD extension).

Example The following batch file uses **rem** both to include comments in the file and to add spacing between the comments:

```
echo off
rem This batch file performs a disk check on
rem the disk in drive A and then displays the
rem disk directory in wide format.
rem
rem To allow the user to indicate a disk drive
rem from the command line, modify the batch
rem file to use replaceable parameters.
rem
chkdsk a:
dir a: /w
```

Rem (Remark)



rem [*text*]

Includes a remark or descriptive comment in your CONFIG.SYS file. Lines that begin with **rem** are not processed by MS OS/2.

text

Specifies the remark or comment that you want to include in your CONFIG.SYS file. *Text* may be any string of characters that fits on one line.

If the comment you want to put in the CONFIG.SYS file is too long to fit on one line, you must use **rem** again for each line of the comment. You can also use **rem** without *text* to add spacing between blocks of comments or remarks.

Example To leave a comment in a configuration file for another person's use or to remind yourself of the purposes of the commands in the file, begin each line of the comment with **rem**, as in the following:

```
rem MS OS/2 uses CONFIG.SYS to configure your system.
rem This command (rem) allows you to insert
rem comments in CONFIG.SYS that remind you
rem what a particular command is supposed to do.
```

Rename



Renames a file, a directory, or a group of files with similar names.

When you choose this command, a dialog box appears, containing two text boxes: From and To. The From text box shows the name of the file or directory you selected from the directory window. You can edit the contents of this box if you want to rename a file or directory other than the one selected. In the To text box, you can type the new filename or directory name.

When you rename a directory, the date and time of the directory's creation change; when you display full file details, you see the new date and time.

You can rename a group of files with similar names by using wildcard characters in both the old and the new name.

Warning If you try to rename a file or directory with a name that already exists, MS OS/2 displays an error message or, if Confirm On Replace is on, asks you to confirm that you want to overwrite the file or directory that originally had that name.

If you try to rename multiple files by typing multiple filenames in the From text box, MS OS/2 renames the first file and then displays an error message or, if Confirm On Replace is on, asks you to confirm that you want to overwrite the first file.



Changes the name of a program group in Start Programs.

When you choose this command, a dialog box appears, containing a list box and a text box. You can select a group name from the list of current groups in the list box and then type the new name in the text box.

A group name can be up to 60 characters and can include letters, numbers, spaces, and any symbols except the backslash (\). When you choose the Rename button, the name changes and you switch to the group you just renamed.

Rename



rename [*drive:*][*path*]*filename1 filename2*

Changes the name of a file. You can abbreviate **rename** as **ren**.

filename1

Specifies the old name of the file. If you do not specify a drive and path, MS OS/2 assumes that the file is in the current directory on the current drive.

filename2

Specifies the new name of the file. You cannot specify a drive or path for the new name; **rename** changes only the name of the file.

You can use wildcard characters in *filename1* and *filename2*.

You cannot use **rename** to move files from one drive or directory to another.

If a file with the name specified for *filename1* already exists in the directory, MS OS/2 displays an error message.



Works the same way in the DOS session as described above.

Example To change the extension of all the files in the current directory in drive B that have a .DOC extension from .DOC to .TXT, type the following:

```
rename b:*.doc *.txt
```

Repeat Job



Creates a new copy of a job in the print queue. The new job has the same characteristics as the old job.

Replace



replace [*drive:*][*path*]*filename* [[*drive:*]*path*] [*/a*] [*/p*] [*/r*] [*/s*] [*/w*]

Selectively replaces files on the destination disk with new versions of those files from the source disk, or adds new files to the destination disk.

filename

Specifies the source file that will replace the file in the destination directory. You can use wildcard characters in the source filename to replace groups of files with similar names.

path

Specifies the directory that contains the file to be replaced or to which you want to add the file. If you do not specify a directory, **replace** uses the current directory on the current drive.

- /a** Adds only the files specified in *filename* that do not exist in the destination directory, and does not replace existing files. This option is incompatible with the **/s** option.
- /p** Prompts you for confirmation before replacing or adding a file.
- /r** Replaces read-only files as well as unprotected files. If you do not use this option and you try to replace a read-only file, the replacement process stops and you see an error message.
- /s** Replaces files in the subdirectories of the destination directory if the filenames match those specified in *filename*. **Replace** never searches subdirectories of the source directory. This option is incompatible with the **/a** option.
- /w** Tells **replace** to wait for you to insert a disk before beginning to search for source files. Otherwise, **replace** starts replacing or adding files immediately.

This command is usually used to update the software on your hard disk. You cannot use **replace** to update hidden files or system files.

DOS

Works the same way in the DOS session as described above.

Examples To update your phone-list file, PHONES.CLI, in all the directories on your hard disk (drive C) with the latest version of PHONES.CLI from the disk in drive B, type the following:

```
replace b:\phones.cli c:\ /s
```

To add several new printer drivers from the disk in drive A to the directory MSTOOLS on your hard disk (drive C), type the following:

```
replace a:*.prd c:\mstools /a
```

Restore



Restores a window to the size and position it had before it was either shrunk to an icon or enlarged to its maximum size.

If the application is neither shrunk to an icon nor enlarged to its maximum size, this command is inactive.

Restore



restore *drive1*: [*drive2*:][*path*][*filename*] [/s] [/p] [/b:date] [/a:date] [/e:time] [/l:time] [/m] [/n]

Restores backup files that were created by using the **backup** utility.

drive1:

Specifies the drive that contains the backup disk on which the backup copies of your files are stored.

drive2:

Specifies the drive that contains the destination disk to which you want to restore the files. The destination disk does not have to be of the same type as the source disk. If you do not specify *drive2*, **restore** uses the current drive.

filename

Specifies the file or files that you want to restore. You can use wildcard characters to specify multiple files with similar names.

If you do not specify a filename, **restore** looks in the current directory on the current drive for filenames that match those found on *drive1*.

/s Restores the files in subdirectories of the directory that contains *filename*.

/p Prompts you for confirmation before restoring read-only files or files that have changed since the last backup operation.

/b:date

Restores only files that were modified on or before the specified date.

/a:date

Restores only files that were modified on or after the specified date.

/t:time

Restores only files that were modified at or before the specified time. You should use this option only if you use the **/b:date** or **/a:date** option.

/l:time

Restores only files that were modified at or after the specified time. You should use this option only if you use the **/b:date** or **/a:date** option.

/m Restores only files that have been modified since the last backup operation, and turns off the archive bits of the restored files.

/n Restores only files that no longer exist on the destination disk.

The **restore** utility can restore files only to their original directory.

The **restore** utility cannot restore CMD.EXE, COMMAND.COM, or the hidden system files.

Restore restores backup files that were created by using the MS OS/2 **backup** utility or the MS-DOS **backup** utility (including versions 3.21 and earlier of MS-DOS, even though they use a different structure for backup files).

DOS

Works the same in the DOS session as described above.

You cannot use **restore** on drives that have been assigned, joined, or substituted with the **assign**, **join**, or **subst** command.

Example To restore all the files on drive A with the extension .NEW that were backed up from the directory LETTERS on the disk in drive B, type the following:

```
restore a: b:\letters\*.new
```

Resume



Returns you to the application from which you selected the command.

This command appears on the application's Exit menu (Control Panel and File System) or Shutdown menu (Task Manager). Its effect is the same as the effect of pressing ALT or F10 after selecting the menu—the menu disappears and you are back in the work area of the application window.

Rmdir (Remove Directory)



rmdir [*drive:*]*path* [...]

Deletes a directory. You can abbreviate **rmdir** as **rd**.

path Specifies the directory that you want to delete.

Before you can delete a directory, you must delete all the files and sub-directories in that directory. (The empty directory still shows listings for the working directory [.] and the parent directory [..] if you list its contents with the **dir** command.)

You can delete more than one directory at a time by specifying each directory separately on the same command line.



Works the same way in the DOS session as described above, except that in the DOS session you cannot specify multiple directories.

Example To remove the directory BILLS and the directory NOTICES from the root directory on drive B, type the following:

```
rmdir b:\bills b:\notices
```

Rmsize (Real-mode Size)



rmsize=x

Sets the amount of memory that MS OS/2 reserves for the DOS session. To use this command, place it in your CONFIG.SYS file.

- x* Specifies the size, in kilobytes, of the portion of memory reserved for the DOS session. This number must be in the range 0 to 640. The default depends on the total amount of system memory.

MS OS/2 uses the first *x* kilobytes of memory (“low memory”) in your computer to run the DOS session; memory above *x* kilobytes is used for the rest of MS OS/2 (apart from certain device drivers and essential MS OS/2 functions that use a small portion of the first *x* kilobytes).

The default size of *x* depends on how much memory your system has, but it is always the largest size possible on your system (up to the maximum of 640K). The default size is typically either 512K or 640K—the amount of memory installed below 1024K.

Because the **rmsize** command affects only the DOS session, it has no effect unless **protectonly** is set to **no** (the default setting). (If **protectonly** is set to **yes**, you cannot run the DOS session at all.)

For information about setting the size of the environment for the DOS session, see the **shell** command.

Note The memory reserved by the **rmsize** command cannot be swapped, so this memory is unavailable to any other program or process.

Example To reserve only 384K of memory for the DOS session, include the following line in your CONFIG.SYS file:

```
rmsize=384
```

Run



run=[drive:][path]filename [arguments]

Starts a background program when you start your system. To use this command, place it in your CONFIG.SYS file.

filename

Specifies the program you want to start, which must be one that can run in the background. You must include the extension (.COM or .EXE), and you must give the drive and path if the file is not located in the root directory of your start-up drive. *Filename* cannot be a batch file.

arguments

Specifies any valid options or other variables for the application.

You can include more than one **run** command in your CONFIG.SYS file.

MS OS/2 processes all the **device** commands in your CONFIG.SYS file before it starts processing any **run** commands.

While processing a CONFIG.SYS file, MS OS/2 preserves the difference between uppercase and lowercase letters in arguments; this can be important for some programs that are case sensitive.

Screen Colors



Changes the colors of the different elements on your screen.

When you choose this command, a dialog box appears, containing a list of all the elements of the screen (for instance, window borders, screen background, title bar, and window text); a sample screen with a sample window, so that you can see the effects of the changes you make; and three color bars, on which you can adjust the color, the shade, and the amount of color for each element.

Scroll



Allows you to use the **DIRECTION** keys (the directional arrow keys and the **PAGE UP** and **PAGE DOWN** keys) on your keyboard to scroll the contents of a window when they do not fit in one screen.

Once you have chosen this command, it remains in effect until you choose it again. While it is in effect, a check mark appears next to the command name on the menu.

This command appears on the System menu only for full-screen OS/2 applications running in a window.

Select All



Selects all the files and directories in the active directory window. All the filenames and directory names are highlighted.

Set



set [*string1*=[*string2*]]

Defines an environment variable by naming the variable and giving a value for it.

string1

Specifies the name of the environment variable you want to set (for example, **PATH**, **INIT**, **LIB**, or **PROMPT**).

string2

Specifies the string of characters, paths, or filenames that defines the current value of the environment variable.

If you type **set** by itself, the command displays the current values for all the environment variables in the current session.

If you type **set string1=**, **set** removes the current value for that environment variable.

For more information about environment variables, see the *Microsoft Operating System/2 User's Guide*.

You can also use the **set** command to define the replaceable batch parameters by name, instead of by number. For more information about using **set** in batch files and start-up files, see the *Microsoft Operating System/2 User's Guide*.

This version of the **set** command affects only the current session.



Works the same way in the DOS session as described above.

Example To set the INCLUDE environment variable so that the Microsoft C Optimizing Compiler can find include files in the directory INC on drive C, type the following:

```
set include=c:\inc
```

Set



```
set string1=string2
```

Defines an environment variable by naming the variable and giving a value for it. To use this version of the **set** command, place it in your CONFIG.SYS file.

string1

Specifies the name of the environment variable you want to set (for example, PATH, INIT, LIB, or PROMPT).

string2

Specifies the string of characters, paths, or filenames that defines the current value of the environment variable.

The following **set** commands are placed in your CONFIG.SYS file during MS OS/2 installation to set the search paths for **cmd** and other programs:

```
set path=c:\os2;c:\os2\system;c:\os2\install;c:\;  
set dpath=c:\os2;c:\os2\system;c:\os2\install;c:\;
```

For more information about environment variables, see the *Microsoft Operating System/2 User's Guide*.

You can also use the **set** command in your CONFIG.SYS file to define the replaceable batch parameters by name instead of by number. For more information about using **set** with batch files and in your start-up files, see the *Microsoft Operating System/2 User's Guide*.

This version of the **set** command affects all sessions.

Setcom40

DOS

setcom40 COMx=on | off

Sets the address of the specified serial port so that a DOS application can find the port and use it.

- x** Specifies the number of the serial port for which you want to set the address. This number can be 1, 2, or 3.
- on** Sets the address of the serial port in memory.
- off** Removes the address of the serial port from memory.

You will need to use this utility if you used the **device** configuration command in your CONFIG.SYS file to load COM0x.SYS; most DOS applications send their output directly to the serial port, rather than through this device driver, so they must have the port address.

You must set the port address before you start the DOS application.

Do not use **setcom40** if a program in either the Presentation Manager or a full-screen OS/2 session is using COM0x.SYS to control access to the serial port that you want to use. Be sure that any MS OS/2 program that is using the serial port (including the spooler, which may have files queued up waiting to use the port) is finished running before you try to use the port from the DOS session. Conversely, once you have set **setcom40** to **on** and given a DOS application access to a serial port, be sure that that application has finished running before you switch out of the DOS session.

Examples To set the address of serial port COM2 so that an application can use the port in the DOS session, type the following:

```
setcom40 com2=on
```

To remove the address of COM2 from memory and give access to the port back to MS OS/2, type the following:

```
setcom40 com2=off
```

Example The following batch file (named COPYTO.COM or COPYTO.BAT) uses **shift** to copy a list of files to your current directory:

```
echo off
if "%1"==" " goto usage
:start
copy %1
shift
if "%1"==" " goto done
goto start
:usage
echo * This batch program copies any number
echo * of files to your current directory.
echo *
echo * Usage: copyto file1 file2 file3 [...]
:done
```

Show Outline Tree



Changes the way directories are displayed in the Directory Tree window, so that you can control the amount of directory information provided.

The Show Outline Tree command displays the directory structure with icons that indicate whether another directory level exists. You can choose these icons to collapse or expand those branches of the directory tree. When the branch is in its expanded state, there is a minus-sign (-) icon; choosing the icon then collapses the branch. When the branch is in its collapsed state, there is a plus-sign (+) icon; choosing the icon then expands the branch to the next level. If the Show Outline Tree command is not in effect, the directory structure appears in expanded form, but without the icons.

Shutdown Now



Closes application windows and quits applications, so that only the DOS session and the Start Programs, Task Manager, and Spooler Queue Manager applications are left running.

When you choose this command, a dialog box appears, asking you to confirm that you want to close all applications. Some applications also display their own dialog boxes asking you to confirm that you want to quit. Any application with unsaved files displays a dialog box asking you whether you want to save the files.

Size



Changes the size of a window.

Once you have chosen this command, you can use the **DIRECTION** keys to move the window's borders in order to change its size and shape. Press **ENTER** to fix the window in its new size and shape, or press **ESC** to return the window to its previous size and shape.

Small Font



Changes the size of the letters used to display text in an OS/2 application running in a window, so that more lines fit on the screen. The width of the letters doesn't change, but they become shorter.

When you enlarge the window to its maximum size, the maximum number of lines displayed remains the same whether you are using the smaller or larger font size. This is because the window itself changes size when you change the font size. You cannot enlarge the window to the full-screen size when the Small Font command is in effect.

This command reverses the effect of the Large Font command. When the letters on the screen are in the smaller font size, this command appears as Large Font on the menu.

Sort



sort [/r] [/+n] < source

Sorts lines of input in alphabetical and numeric order and sends the output lines to the screen.

- /r** Sorts the lines in reverse order (that is, from Z to A, then from 9 to 0) according to the first character of each line.
- /+n** Starts sorting the lines according to the character in column *n* (that is, the *n*th character from the beginning of the line). If you do not specify this option, **sort** starts sorting according to the first character of each line.

source

Specifies the source of the input. The keyboard is the default, but you can also redirect a file or the output from another command. For more information about redirection, see the *Microsoft Operating System/2 User's Guide*.

Sort uses the collating sequence table that is appropriate to the country-code and code-page settings. It does not distinguish between uppercase and lowercase letters.

Note If you try to sort a file that is too large, the **sort** utility gives you an error message. A file is too large if it is larger than 63K or if the number of lines is greater than $((\text{file size in bytes} + 768) / 4)$. To sort a large file, split the file into two or more smaller files and try the utility again.

DOS

Works the same way in the DOS session as described above.

Examples To sort the contents of the file PHONE.TXT in reverse alphabetical order and display the output on your screen, type the following:

```
sort /r < phone.txt
```

To sort a listing of the filenames in the CLIENTS directory on drive B and send the sorted list to the file CLIENTS.LST on drive C, type the following:

```
dir b:\clients | sort > c:clients.lst
```

Spool

OS/2

spool [/d:device1] [/o:device2]

Starts the printer spooler so that MS OS/2 can print files in the background while doing something else. By using the spooler, you can control the printing of files from several different applications.

/d:device1

Identifies the parallel port that is connected to the printing device. This is the device that the original printing command was sending

its output to. The default is LPT1. You cannot specify a serial device as *device1*, but you can use any parallel device (printer, plotter, etc.) that supports monitors.

/o:device2

Identifies the output printing device. You can specify any parallel port (LPT1, LPT2, LPT3, or PRN) or any serial port (COM1, COM2, etc.). If you do not specify *device2*, **spool** uses *device1* as the default.

The spooler intercepts files that are being sent by the **print** utility or the printing command of an application to a printer connected to a parallel port, holds them temporarily in a directory on disk, and then prints them one at a time.

Because the output device can be different from the one specified in the printing command, you can use the **spool** utility to redirect parallel-printer output (for example, to an asynchronous serial device).

The **spool** utility affects all sessions.

Example To spool your print jobs and print them on a serial printer connected to COM1, type the following:

```
spool /o:com1
```



Spooler Options



Turns the print spooler on or off and changes the directory that the spooler uses to store files.

When you choose this command, a dialog box appears, containing a check box you can use to select the spooler and a text box in which you can change the spooler path. When you turn the check box on, the spooler starts immediately. As long as the check box is on, the spooler starts each time you start your system. When you turn the check box off, it does not affect the spooler until the next time you start your system.

Spooler Queue Manager



Sets up printers, and controls and organizes print jobs.

This application lets you send and control print jobs for more than one printer and set up multiple print queues.

Spooler Queue Manager has three menus: Queue, Job, and Special.

- The Queue menu contains the Hold Queue, Release Queue, Hold All Jobs, Release All Jobs, and Cancel All Jobs commands.
- The Job menu contains the Job Details, Cancel Job, Print Job Next, Repeat Job, Start Job Again, Hold Job, and Release Job commands.
- The Special menu contains the Refresh and Auto Refresh commands.

For more information about a specific Spooler Queue Manager command, see the individual entry for the command.

Spooler Queues



Associates a print queue with a queue processor; changes the options for a queue processor; and adds, changes, or deletes a queue name.

When you choose this command, a dialog box with lists of the available queues and queue processors appears. You associate a queue and a queue processor by selecting the name of a queue from the first list and the name of a queue processor from the second list. You can associate only one queue processor at a time with a queue.

The dialog box also contains command buttons labeled Names and Setup. When you choose these buttons, further dialog boxes appear. You can use the Names button to add, change, or delete a queue processor and to specify any relevant network options. (Network options are determined by your network software. See your network manual for any options you may need to specify.) You can use the Setup button to change options for the queue processor, such as how problems are reported and handled.

Start



Starts the program you have selected from the list in the current group in Start Programs.

Start



```
start ["session"] [/k | /c | /n] [/f] [/fs | /win | /pm] [/i]
[drive:][path]command[.ext] [options]
```

or

```
start "session" [/k | /c] [/f] [/fs | /win | /pm] [/i]
" [drive:][path]command[.ext] [options]"
```

or

```
start ["session"] [/k] [/f] [/fs | /win] [/i]
```

Starts an MS OS/2 command interpreter and tells it to carry out the command you specify.

session

Specifies the name of the new session as it will appear in Task Manager. The name can be up to 60 characters and can include spaces; it must be surrounded by double quotation marks. If you do not specify a name, **start** uses the filename you specified for the *command* argument. If you do not specify either *session* or *command*, **start** uses CMD.EXE.

- /k** Tells the command interpreter to run the command you specify and then keep the session open when the command is completed. This option is the default unless *command* starts a Presentation Manager application, in which case the default is **/n**. You cannot use **/k** with the **/pm** option.
- /c** Tells the command interpreter to carry out *command* and then end the session and return to the program from which it was started. You cannot use this option with the **/pm** option.
- /n** Tells MS OS/2 to run *command* without starting the command interpreter. This option is the default if *command* starts a Presentation Manager application. You cannot use **/n** if you have

enclosed the command and its options in double quotation marks (see the following *options* description), nor can you use */n* if *command* is a batch file or attempts to use a batch file (batch files require **cmd** as their batch processor).

- /f** Tells MS OS/2 to run the command in the foreground. Note that if you use several **start** commands in a batch file, you can use only one */f* option; MS OS/2 ignores all but the first one.
- /fs** Tells MS OS/2 to run the command as a full-screen application in the foreground, in a session independent of Presentation Manager.
- /win** Tells MS OS/2 to run the command in a Presentation Manager window.
- /pm** Tells MS OS/2 to run the command as a Presentation Manager application. You cannot use this option with the */k* or */c* option, nor can you use it if *command* is a batch file.
- /i** Tells **start** to use the environment set in your CONFIG.SYS file. The environment includes environment variables such as PATH, DPATH, and the drive and directory for a session.

command[.ext]

Specifies the command you want the command interpreter to carry out. This may be an MS OS/2 command, a utility, a batch file, or a command that starts an application. If you do not specify an extension, MS OS/2 searches for *command* with the extensions .COM, .EXE, and .CMD, in that order.

options

Specifies any valid options for *command*. If you specify *options*, you need to enclose *command* and *options* in double quotation marks so that **start** will not attempt to interpret the options as its own.

The **start** command runs *command* as an independent program according to the type of application it is. You can override the **start** defaults by using the */fs*, */win*, or */pm* option.

If you type **start** without specifying a command, MS OS/2 starts a command interpreter (**cmd**) without running a command.

Example To start an MS OS/2 command interpreter and run an application named Videophile in the foreground session, type the following (assuming that the command you use to start Videophile is **videop**):

```
start "Videophile" /f videop
```

Start Job Again



Stops a job that is printing and starts it printing again from the beginning.

This command affects only a job that is already printing.

Start Programs



Starts programs and organizes them into groups.

From Start Programs, you can start Presentation Manager applications, as well as MS OS/2 batch programs, commands, utilities, and applications.

Start Programs lists programs in groups. The list that appears when you start Presentation Manager is for the Main Group.

Start Programs has two menus: Program and Group.

- The Program menu contains the Start, Add, Change, Delete, Copy, and Minimize On Run commands
- The Group menu contains the Add, Delete, and Rename commands and the names of the current groups in Start Programs, with a check mark next to the name of the active group.

For more information about a specific Start Programs command, see the individual entry for the command.

Subst (Substitute)



subst *[[drive1: drive2:path] | [drive1: /d]]*

Temporarily substitutes a drive letter for another drive letter and directory path. While a substitution is in effect, MS OS/2 regards any reference to *drive1* as a reference to *drive2:path*.

drive1:

Specifies the drive letter you want to substitute for a directory on *drive2*.

drive2:path

Specifies the drive and path of the directory for which you want to substitute *drive1*.

/d Deletes an existing substitution. You must specify *drive1* to identify which substitution is to be deleted, but you must not specify *drive2:path* with the **/d** option.

If you type **subst** by itself, the utility displays the substitutions currently in effect.

The following utilities do not work on a drive you have substituted for a directory on another drive:

backup	format
chkdsk	label
diskcomp	recover
diskcopy	restore
fdisk	

Example To substitute the drive letter F for the directory path \MONTHLY\FEBRUARY\WEEKENDS on the disk in drive A, type the following:

```
subst f: a:\monthly\february\weekends
```

Swappath



swappath=*drive:[path] [space]*

Specifies the location of the swap file that temporarily holds the information being swapped from memory if you have enabled swapping between memory and disk. To use this command, place it in your CONFIG.SYS file.

drive:

Specifies the drive on which the swap file is located.

space

Specifies the minimum amount of disk space, in kilobytes, to leave free on the swap drive. This number must be in the range 0 to 32767; the default is 512.

The **swappath** command takes effect only if the **memman** command in your CONFIG.SYS file is set to allow swapping.

For information about swapping, see the **memman** command.

Example To tell MS OS/2 to put the swap file in the TEMP directory on your hard disk (drive C) and to reserve 1024 kilobytes of free disk space on the swap drive, include the following line in your CONFIG.SYS file:

```
swappath=c:\temp 1024
```

Switch To



Switches to the application you have selected from the list in Task Manager.

You can also switch to the application by simply selecting it from the list and pressing ENTER.

System Editor



Provides editing functions that let you create and edit text files in MS OS/2.

The following list describes the System Editor commands and their functions. While all of the commands listed can be typed at the System Editor command line, some have keyboard equivalents as well.

Command	Keyboard Equivalent	Function
Autosave		Automatically saves a file after a specified number of lines have been changed.
Backspace	BACKSPACE	Deletes the character to the left of the cursor.
Backtab	SHIFT+TAB	Moves the cursor back one tab stop.
Backward	PAGE UP	Scrolls up one screen page.
Bottom	CTRL+END	Moves the cursor to the last line of the file.
Cancel	F3	Quits System Editor.
Change		Replaces specified text with new text.
Copymark	ALT+C	Copies marked text to the line below the cursor.
Cursorbottom		Moves the cursor to the bottom of the screen.
Cursormid		Moves the cursor to the middle of the screen.
Cursortop		Moves the cursor to the top of the screen.
Delete	CTRL+BKSP	Deletes the current line.
Deletebol	CTRL+B	Deletes characters from the beginning of the line to the cursor.
Deletelchar	DEL	Deletes the character under the cursor.
Deleteeol	CTRL+E	Deletes characters from the cursor to the end of the line.
Deletemark	ALT+D	Deletes marked text.
Dos	F4	Runs an MS OS/2 command from the System Editor command line.
Down		Moves the cursor down a specified number of lines.
E		Starts the System Editor.
End	END	Moves the cursor to the end of the current line.
Endline	END	Moves the cursor to the end of the current line.

Enter	ENTER	Inserts a blank line.
File	ALT+F4	Saves the current file and exits from System Editor.
Forward	PAGE DOWN	Scrolls down one screen page.
Get		Copies a specified file into the current file at the line below the cursor.
Help	F1	Displays System Editor Help.
Home	HOME	Moves the cursor to the beginning of the current line.
Insert	INS	Inserts a blank line below the cursor.
Insertbefore		Inserts a blank line before the current line.
Inserttoggle	INS	Switches between insert and replace modes.
Join	ALT+J	Joins the current line with the line below it.
Left	LEFT	Moves the cursor left a specified number of characters.
Linebottom		Puts the current line at the bottom of the screen.
Linemid		Puts the current line in the middle of the screen.
Linetop		Puts the current line at the top of the screen.
Locate		Finds the specified text the first time it appears after the cursor.
Markline	ALT+L	Marks a line or block of lines for copying, moving, or deleting.
Movemark	ALT+M	Moves marked text to the line below the cursor.
Name		Changes the name of the current file.
Nextfile	F2	Displays the next open file.
Pgdn	PAGE DOWN	Scrolls down one screen page.
Pgup	PAGE UP	Scrolls up one screen page.
Prevfile	ALT+F2	Displays the previously opened file.

Quit	F3	Exits from System Editor without saving current changes.
Right	RIGHT	Moves the cursor right a specified number of characters.
Save	ALT+F3	Saves the current file without exiting from System Editor.
Split	ALT+S	Splits the current line at the cursor.
Tab	TAB	Moves the cursor forward one tab stop.
Top	CTRL+HOME	Moves the cursor to the beginning of the file.
Undo	F9	Restores a line to the way it was before you changed it.
Unmark	ALT+U	Unmarks text that has been marked.
Up		Moves the cursor up a specified number of lines.

Task Manager



Lists the programs you have running and lets you switch to or end another program, arrange windows, or shut down your system.

Task Manager contains three menus: Task, Arrange, and Shutdown.

- The Task menu contains the Switch To, Close, and Minimize After Use commands.
- The Arrange menu contains the Cascade and Tile commands.
- The Shutdown menu contains the Shutdown Now and Resume Task Manager commands.

For more information about a specific Task Manager command, see the individual entry for the command.

Task Manager



Switches to Task Manager.

Threads



threads=x

Tells MS OS/2 how many threads it can run at one time. To use this command, place it in your CONFIG.SYS file.

- x* Specifies the number of threads. This number must be in the range 64 to 255; system installation sets the number to 128. Because threads take up memory in your system, it is recommended that you do not increase the number of threads unless your application tells you to do so or you receive a message telling you that you have run out of threads.

A thread is part of an application or other process that can be scheduled by MS OS/2 to run on its own. A process generally contains multiple threads, which act like small programs that perform particular tasks in each process. Approximately forty of the threads you specify with the **threads** command are system threads that MS OS/2 uses (the number may vary, depending on how your system is configured). These threads are not available to applications.

Tile



Resizes and rearranges the directory windows within the application window so that they are next to each other, without overlapping.



Resizes and rearranges application windows, except those that have a fixed size, such as Control Panel, so that they are next to each other, without overlapping.

The windows are resized so that together they fill the entire screen window, except for an area at the bottom for icons. Fixed-size windows appear in front of the tiled windows.

Time



time [*hours:minutes*][:*seconds*[.*hundredths*]]

Sets the system clock by telling it the current time.

hours

Specifies a number in the range 0 to 23.

minutes

Specifies a number in the range 0 to 59.

seconds

Specifies a number in the range 0 to 59; the default is 0.

hundredths

Specifies a number in the range 0 to 99; the default is 0.

MS OS/2 keeps track of time in a 24-hour format and uses the time information to update directory listings whenever you create or change a file.

You may use either colons (:) or periods (.) to separate the hours, minutes, and seconds. To separate hundredths, you must use a period.

If you type **time** by itself, the command displays the current time and then prompts you for a new time. If you don't want to change the time, just press ENTER.



Works the same way in the DOS session as described above.

Example To set the system time to 1:36 P.M., type the following:

```
time 13:36
```

Timeslice



timeslice=*x*[,*y*]

Sets the amount of time that MS OS/2 allocates to a thread before checking the priority of other threads. Time slices are the units of time that MS OS/2 uses to schedule its activities. To use this command, place it in your CONFIG.SYS file.

- x* Specifies the minimum length of the time slice, in milliseconds; the default is 32.
- y* Specifies the maximum length of the time slice, in milliseconds. This number must be equal to or greater than *x*. If you do not specify *y*, MS OS/2 uses *x* as the maximum length also. If you do not include **timeslice** in your CONFIG.SYS file, the default value of *y* is 248.

When **timeslice** is set to 32 (the default), the process that is running in the foreground receives the most CPU time. For more information about this topic, see the **maxwait** and **priority** commands.

Example To set the minimum length of the time slice to 45 milliseconds and the maximum length to 148 milliseconds, include the following line in your CONFIG.SYS file:

```
timeslice=45,148
```

Trace



trace [**on** | **off**] [*eventcode* | *tdf*], [*eventcode* | *tdf*][...]

Turns the system trace on or off.

on Starts tracing system events.

off Stops tracing system events.

eventcode

Specifies an event by using a decimal code number in the range 0 to 255. You use the event code to selectively turn on or off the tracing of specified system events. You can specify more than one event code, separating them with commas.

tdf Specifies a trace definition file. The filename must not include a drive, path, or filename extension.

The system trace records actions, such as hardware interrupts or system functions, that MS OS/2 has taken or processed while running. These actions are known as events and are identified by event codes. This information can be useful if you are writing a program to run with MS OS/2.

The **trace** utility is similar to the **trace** configuration command. However, the **trace** utility cannot create a trace buffer in which to store the trace information. Therefore, the utility will not work unless either the **trace** or the **tracebuf** configuration command is in your CONFIG.SYS file when you start your system.

If you do not specify an event code, **trace** turns the system trace on or off for all events.

If you type **trace** by itself, the utility displays the current setting of the system trace.

Example To tell MS OS/2 to trace events 0 and 1, and no other system events, first type the following to turn off the system trace:

```
trace off
```

Then type the following to turn on the trace for the events you want recorded:

```
trace on 0, 1
```

Trace



trace=on | off [*eventcode* [, *eventcode*][...]]

Turns the system trace on or off. To use this command, place it in your CONFIG.SYS file.

on Starts tracing system events.

off Stops tracing system events. This is the default setting.

eventcode

Specifies a single event by using a decimal code number in the range 0 to 255. The **trace** command turns the system trace on or off for only those events. You can specify more than one event code, separating them with commas.

The system trace records actions, such as hardware interrupts or system functions, that MS OS/2 has taken or processed while running. These actions are known as events and are identified by event codes. This information can be useful if you are writing a program to run with MS OS/2.

If you do not specify an event code, **trace** turns the system trace on or off for all events.

If you specify an invalid event code, MS OS/2 still traces the other events listed but gives you an error message.

If you include the **trace** command in your CONFIG.SYS file but do not use the **tracebuf** command to specify a size for the trace buffer, MS OS/2 sets aside the default of 4 kilobytes of memory for the trace buffer.

Example To turn on the system trace for all events except those that have the event codes 31 through 34, include the following lines in your CONFIG.SYS file:

```
trace=on
trace=off 31,32,33,34
```

Tracebuf (Trace Buffer)



tracebuf=x

Sets the size of the system-trace buffer, where MS OS/2 stores information about system events that are being traced. To use this command, place it in your CONFIG.SYS file.

x Specifies the size, in kilobytes, of the trace buffer. This number must be in the range 1 to 63; the default is 4.

If you include the **trace** command in your CONFIG.SYS file but do not use the **tracebuf** command to specify a size for the trace buffer, MS OS/2 sets aside the default of 4 kilobytes of memory for the trace buffer.

You must include either the **trace** or **tracebuf** command in your CONFIG.SYS file in order for system tracing to work.

Tracefmt (Trace Formatter)



tracefmt

Displays the contents of the system-trace buffer.

Tracefmt analyzes and formats each trace record in the system-trace buffer and then displays the formatted trace records. (You may want to redirect the **tracefmt** output to a file.) These formatted trace records, which consist of heading information and other trace-event information, are displayed in reverse chronological order, starting with the most recent event.

The system-trace buffer must be created when you start your system; to create the buffer, include either the **trace** or the **tracebuf** configuration command in your CONFIG.SYS file. If you have not done this, there is no buffer and **tracefmt** has nothing to display.

Tree



tree [drive:] [/f]

Displays the path of each directory on a disk and lists all the subdirectories (and, as an option, all the files as well).

drive:

Specifies the drive that contains the disk for which you want to display the directory structure. If you do not specify a drive, the utility displays the directory structure of the disk in the current drive.

/f Lists the names of all the files in each directory and subdirectory on the disk.



Works the same way in the DOS session as described above.

Example To display a list of all the directories and files on the disk in drive B, one screenful at a time, type the following:

```
tree b: /f | more
```

Type



type [*drive:*][*path*]*filename* [...]

Displays the contents of one or more text files, in the order specified, without modifying them.

filename

Specifies the name of the text file you want displayed. You can specify multiple filenames, and you can use wildcard characters to specify groups of files with similar names.

If you use **type** to display a file that contains tabs, **type** expands all the tabs to eight spaces.

If you use **type** to display a binary file or a file created by an application, you may see unusual characters, such as bells, formfeeds, and escape-sequence symbols, in addition to the text.



Works the same way in the DOS session as described above, except that in the DOS session you cannot specify multiple filenames, nor can you use wildcard characters.

Example To display the contents of the file REPORT.JAN from the disk in drive B, type the following:

```
type b:report.jan
```

Undo Selection



Cancels the last selection you made and restores the selection before that. That is, the files or directories that were selected before your last selection are selected again.

If you choose this command twice in succession, without making a new selection in between, nothing happens the second time.

Unpack



unpack [*drive:*][*path*]*filename* [*drive2:*][*path2*] [*/v*]

Decompresses and copies a compressed file.

filename

Specifies the name of the compressed file. This filename has an @ symbol as the third character of its extension.

drive2:

Specifies the drive you want the files to be copied to. If you do not specify a drive, **unpack** uses the current drive.

path2

Specifies the directory you want the files to be copied to. If you do not specify a directory, **unpack** uses the current directory on the specified drive. The **unpack** utility uses the original filename and extension as the destination filename.

/v Verifies that the version level of **unpack** is the same as that of MS OS/2.

The MS OS/2 installation program uses the **copy** command to copy uncompressed files from the installation disks to your system and uses the **unpack** utility to decompress and copy compressed files—those with an @ symbol as the third character of their extension.

The **unpack** utility also copies files that are not compressed, so you can use **unpack** to copy a disk that contains both kinds of files.

The **unpack** utility uses the date, time, and any file attributes of the original, compressed file in the header of the uncompressed file.



Works the same way in the DOS session as described above.

Example To decompress the compressed files on a floppy disk in drive A that contains both compressed and uncompressed files, and then copy all the files on the disk to the root directory of your hard disk (drive C), type the following:

```
unpack a:\*.* c:\
```

Utility Programs



Switches you to the Utility Programs group, which contains such useful programs as System Editor and Control Panel.

When you first start MS OS/2, the Main Group is automatically selected. To switch to the Utility Programs group, select the Group menu and choose Utility Programs. Start Programs then displays the list of programs in this group and places a check mark next to Utility Programs on the Group menu.

VDISK.SYS



device=[drive:][path]**vdisk.sys** [vdisk-size][, sector-size][, entries]

Directs MS OS/2 to load the VDISK.SYS device driver. To use this command, place it in your CONFIG.SYS file.

When this driver is loaded, it creates a virtual disk drive, which is a disk drive simulated in memory. Information stored in memory can be accessed quickly.

vdisk-size

Specifies the size, in kilobytes, of the virtual disk drive. The default is 64K.

sector-size

Specifies the sector size, in bytes. This number must be 128, 256, 512, or 1024; the default is 128.

entries

Specifies the number of directory entries. This number must be in the range 2 to 1024; the default is 64.

The maximum size of a virtual disk depends on the amount of available memory in your system, up to 4 megabytes. If the virtual-disk size specified is too large to fit in memory, VDISK.SYS will try to make a 16K virtual disk. This may result in a virtual disk with a different number of directory entries than you specified.

When you specify a value for the number of directory entries, the value is rounded up to the nearest sector-size boundary. For example, if you give a value of 43 and your sector size is 512 bytes, 43 will be rounded up to 48, which is the next multiple of 16 (there are sixteen 32-byte directory entries in 512 bytes.)

MS OS/2 recognizes the *vdisk-size*, *sector-size*, and *entries* arguments by their positions. If you omit *vdisk-size* or *sector-size*, you must type a comma before the next argument, as a placeholder. (If you include all three arguments, you can use spaces instead of commas.)

You must place the **device=vdisk.sys** command *after* any **device=extdiskdd.sys** commands in your CONFIG.SYS file.

Ver (Version)



ver

Displays the MS OS/2 version number.



Works the same way in the DOS session as described above.

Verify



verify [on | off]

Turns write verification on or off.

When verification is on, each time MS OS/2 writes a file to a disk it checks whether the information was written correctly (that none of it was written to bad sectors, for example) and displays an error message if it cannot successfully write the file to the disk. The default setting is **off**.

If you type **verify** by itself, the command displays a message telling you whether verification is on or off in the current session.

This command affects only the current session.

DOS

command

Works the same way in the DOS session as described above.

Vol (Volume Label)

OS/2

cmd

vol [*drive:*] [...]

Displays the volume label of the specified disk, if it has one.

drive:

Specifies the drive containing the disk for which you want to know the label. You can see the labels of more than one disk by specifying more than one drive. If you do not specify a drive, **vol** displays the volume label of the disk in the current drive.

DOS

command

Works the same way in the DOS session as described above, except that in the DOS session you cannot specify multiple drive names.

Example To find out what the volume labels are for the disk in drive A and for your hard disk (drive C), type the following:

```
vol a: c:
```

Warning Beep



Turns on or off the sound that accompanies error messages and other warnings from the system.

The first time you choose this command, it turns the warning sound off; the next time, it turns the warning sound on again. When the warning sound is on (the default), the command name has a check mark next to it on the Preferences menu.

Xcopy (External Copy)



xcopy [*drive1*][:*path1*][*filename1*] [*drive2*][:*path2*][*filename2*]
[*/s*] [*/e*] [*/p*] [*/v*] [*/a*] [*/m*] [*/d:date*]

Copies files and directories, including any subdirectories, from one disk to another.

drive1:

Specifies the drive that contains the disk from which you want to copy files (the source disk). You can use this argument by itself, with *path1*, or with *path1* and *filename1*. If you specify just *drive1*, **xcopy** copies all the files in the current directory on that drive.

path1

Specifies the directory where the files you want to copy are located. If you specify *path1* without *drive1* or *filename1*, **xcopy** copies all files in the specified directory on the current drive.

filename1

Specifies the name of the file you want to copy. You can use wild-card characters to copy multiple files with similar names.

drive2:

Specifies the drive that contains the disk to which you want to copy files (the destination disk). You can use this argument by itself, with *path2*, or with *path2* and *filename2*. If you specify just *drive2*, **xcopy** copies files to the current directory on that drive and uses the original filenames.

path2

Specifies the directory you want the files copied to. If you specify *path2* without *filename2*, **xcopy** uses the original filenames.

filename2

Specifies the filename to which you want to copy the file. You can use wildcard characters to give multiple files similar names.

- /s** Copies directories and subdirectories, unless they are empty. If you omit this option, **xcopy** works within a single directory.
- /e** Copies all subdirectories, even if they are empty. If you use this option, you must also use the **/s** option.
- /p** Prompts you to confirm whether you want to create each new file.
- /v** Verifies each new file as it is written, to make sure that the new file is identical to the old one.

/a Copies files that have their archive bits set, without modifying the archive bit of the original file.

/m Copies files that have their archive bits set and turns off the archive bit of the original file.

/d:date

Copies files that were modified on or after the specified date. The format of *date* depends on the country code you are using; the default is *mm-dd-yy*.

DOS

Works the same way in the DOS session as described above.

Example To copy all the files, directories, and subdirectories, even empty ones, on the disk in drive A to the disk in drive B, and to verify each file as it is copied, type the following:

```
xcopy a:\ b: /s /e /v
```





Appendix

Code Pages and Keyboard Layouts

MS OS/2 allows you to customize your system for the country you work in (or want to set up the system for) by specifying a country or language, a character set, and a keyboard layout. The character sets (code pages) and keyboard layouts available are shown in the following sections. For information on setting these for your system, see the **code-page**, **country**, and **keyb** commands in the alphabetical section of this manual.

Note The following countries or languages are also supported in special versions of MS OS/2: Arabic, Asia, Hebrew, Japan, Korea, and Taiwan.

Code Pages

A code page is a set of characters that are available to your system for use on the screen, for printing, and for sending any other sort of output. MS OS/2 supports the following five code pages:

437 United States

Hex Digits 1st 2nd	0-	1-	2-	3-	4-	5-	6-	7-	8-	9-	A-	B-	C-	D-	E-	F-
-0		▶		0	@	P	'	p	Ç	É	á	⋮	⌌	⌌	α	≡
-1	☺	◀	!	1	A	Q	a	q	ü	æ	í	⋮	⌌	⌌	β	±
-2	☹	↕	"	2	B	R	b	r	è	Æ	ó	⋮	⌌	⌌	Γ	≥
-3	♥	!!	#	3	C	S	c	s	â	ô	ú	⋮	⌌	⌌	π	≤
-4	♦	‘	\$	4	D	T	d	t	ã	õ	ñ	⋮	⌌	⌌	Σ	f
-5	♣	§	%	5	E	U	e	u	ä	ö	ñ	⋮	⌌	⌌	σ	J
-6	♠	—	&	6	F	V	f	v	å	ù	±	⋮	⌌	⌌	μ	÷
-7	•	↕	'	7	G	W	g	w	ç	û	°	⋮	⌌	⌌	τ	≈
-8	■	↑	(	8	H	X	h	x	ê	ÿ	¿	⋮	⌌	⌌	Φ	°
-9	○	↓	)	9	I	Y	i	y	ë	Ö	⌌	⋮	⌌	⌌	Θ	•
-A	☉	→	*	:	J	Z	j	z	è	Ü	⌌	⋮	⌌	⌌	Ω	•
-B	♂	←	+	:	K	[	k	{	ī	¢	½	⋮	⌌	⌌	δ	√
-C	♀	⌌	,	<	L	\	l		î	£	¼	⋮	⌌	⌌	∞	°
-D	♪	↔	-	=	M	]	m	}	ï	¥	ı	⋮	⌌	⌌	∅	°
-E	♫	▲	.	>	N	^	n	~	Ä	Pt	«	⋮	⌌	⌌	ε	■
-F	☼	▼	/	?	O	_	o	△	Å	f	»	⋮	⌌	⌌	∩	

850 Multilingual

Hex Digits 1st 2nd	0-	1-	2-	3-	4-	5-	6-	7-	8-	9-	A-	B-	C-	D-	E-	F-
-0		►		0	@	P	'	p	Ç	É	á	⌘	⌘	ø	ó	.
-1	☺	◄	!	1	A	Q	a	q	ü	æ	í	⌘	⌘	Ð	β	±
-2	☹	↕	"	2	B	R	b	r	é	Æ	ó	⌘	⌘	Ê	Ô	=
-3	♥	!!	#	3	C	S	c	s	â	ô	ú	⌘	⌘	Ë	Ö	¼
-4	♦	'	\$	4	D	T	d	t	ã	õ	ñ	⌘	⌘	È	ö	‘
-5	♣	§	%	5	E	U	e	u	à	ò	Ñ	À	⌘	ı	Ö	§
-6	♠	—	&	6	F	V	f	v	â	û	ª	Ã	ä	İ	μ	÷
-7	•	↕	'	7	G	W	g	w	ç	ù	º	Ä	Å	Î	þ	˘
-8	■	↑	(	8	H	X	h	x	ê	ÿ	ı	©	⌘	İ	þ	°
-9	○	↓	)	9	I	Y	i	y	ë	Ó	®	⌘	⌘	⌘	Ú	¨
-A	◼	→	*	:	J	Z	j	z	è	Ü	⌘	⌘	⌘	⌘	Û	˙
-B	♂	←	+	;	K	[	k	{	í	ø	½	⌘	⌘	⌘	Ü	¹
-C	♀	⌘	,	<	L	\	l		î	£	¼	⌘	⌘	⌘	Ý	³
-D	🎵	↔	-	=	M	]	m	}	ï	Ø	ı	⌘	⌘	⌘	Ÿ	²
-E	🎵	▲	.	>	N	^	n	~	Ä	×	«	⌘	⌘	⌘	ı	˘
-F	☼	▼	/	?	O	_	o	△	Å	f	»	⌘	⌘	⌘	'	

860 Portuguese

Hex Digits 1st 2nd	0-	1-	2-	3-	4-	5-	6-	7-	8-	9-	A-	B-	C-	D-	E-	F-
-0		►		0	@	P	'	p	Ç	É	á	⌘	⌘	⌘	α	≡
-1	☺	◄	!	1	A	Q	a	q	ü	À	ı	⌘	⌘	⌘	β	±
-2	☹	↕	"	2	B	R	b	r	é	Ê	ó	⌘	⌘	⌘	Γ	≥
-3	♥	!!	#	3	C	S	c	s	â	ô	ú	⌘	⌘	⌘	π	≤
-4	♦	'	\$	4	D	T	d	t	ã	õ	ñ	⌘	⌘	⌘	Σ	f
-5	♣	§	%	5	E	U	e	u	à	ò	Ñ	⌘	⌘	⌘	σ	J
-6	♠	—	&	6	F	V	f	v	Ã	Ú	ª	⌘	⌘	⌘	μ	÷
-7	•	↕	'	7	G	W	g	w	ç	ù	º	⌘	⌘	⌘	τ	≈
-8	■	↑	(	8	H	X	h	x	ê	ı	ı	⌘	⌘	⌘	Φ	°
-9	○	↓	)	9	I	Y	i	y	Ê	Õ	Ô	⌘	⌘	⌘	Θ	•
-A	◼	→	*	:	J	Z	j	z	è	Ü	⌘	⌘	⌘	⌘	Ω	˙
-B	♂	←	+	;	K	[	k	{	í	⌘	½	⌘	⌘	⌘	δ	√
-C	♀	⌘	,	<	L	\	l	|	Ó	£	¼	⌘	⌘	⌘	∞	ⁿ
-D	🎵	↔	-	=	M	]	m	}	ı	Ú	ı	⌘	⌘	⌘	ø	²
-E	🎵	▲	.	>	N	^	n	˘	Ã	⌘	«	⌘	⌘	⌘	ε	■
-F	☼	▼	/	?	O	_	o	△	Å	Ó	»	⌘	⌘	⌘	∩	

863 French Canadian

Hex Digits 1st 2nd ↓	0-	1-	2-	3-	4-	5-	6-	7-	8-	9-	A-	B-	C-	D-	E-	F-
-0		►		0	@	P	'	p	Ç	É	ı	ı	ı	ı	ı	ı
-1	☺	◄	!	1	A	Q	a	q	ü	Ê	'	ı	ı	ı	ı	ı
-2	☹	↕	"	2	B	R	b	r	ê	Ë	ô	ı	ı	ı	ı	ı
-3	♥	!!	#	3	C	S	c	s	â	ô	û	ı	ı	ı	ı	ı
-4	♦	'	\$	4	D	T	d	t	Â	Ë	"	ı	ı	ı	ı	ı
-5	♣	§	%	5	E	U	e	u	à	İ	~	ı	ı	ı	ı	ı
-6	♠	—	&	6	F	V	f	v	ƒ	û	3	ı	ı	ı	ı	ı
-7	•	↕	'	7	G	W	g	w	ç	ú	'	ı	ı	ı	ı	ı
-8	■	↑	(	8	H	X	h	x	è	œ	ı	ı	ı	ı	ı	ı
-9	○	↓	)	9	I	Y	i	y	ë	Ö	ı	ı	ı	ı	ı	ı
-A	☉	→	•	:	J	Z	j	z	è	Ü	ı	ı	ı	ı	ı	ı
-B	♂	←	+	:	K	I	k	{	ï	ø	½	ı	ı	ı	ı	ı
-C	♀	└	.	<	L	\	l	|	î	£	¼	ı	ı	ı	ı	ı
-D	♪	↔	.	=	M	]	m	}	=	Ù	¼	ı	ı	ı	ı	ı
-E	♫	▲	.	>	N	^	n	~	Ä	Û	«	ı	ı	ı	ı	ı
-F	☼	▼	/	?	O	_	o	△	§	f	»	ı	ı	ı	ı	ı

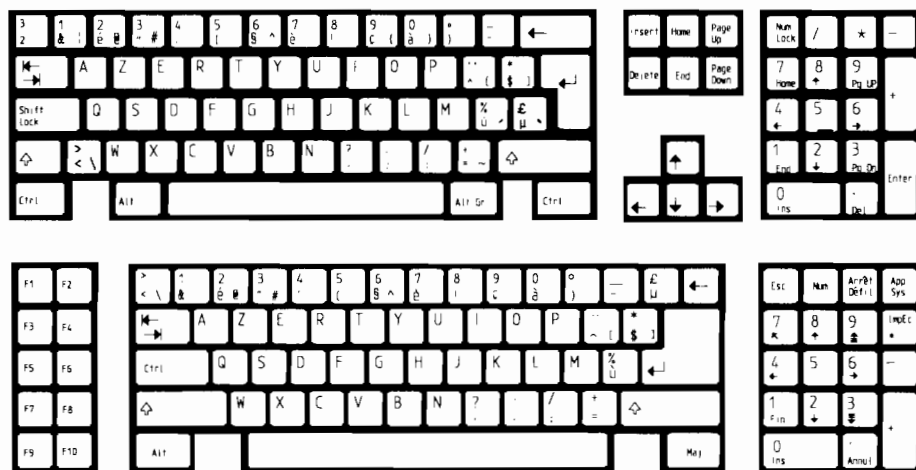
865 Nordic

Hex Digits 1st 2nd ↓	0-	1-	2-	3-	4-	5-	6-	7-	8-	9-	A-	B-	C-	D-	E-	F-
-0		►		0	@	P	'	p	Ç	É	á	ı	ı	ı	ı	ı
-1	☺	◄	!	1	A	Q	a	q	ü	Æ	ı	ı	ı	ı	ı	ı
-2	☹	↕	"	2	B	R	b	r	è	Ë	ó	ı	ı	ı	ı	ı
-3	♥	!!	#	3	C	S	c	s	â	ô	û	ı	ı	ı	ı	ı
-4	♦	'	\$	4	D	T	d	t	ä	ö	ñ	ı	ı	ı	ı	ı
-5	♣	§	%	5	E	U	e	u	à	ö	Ñ	ı	ı	ı	ı	ı
-6	♠	—	&	6	F	V	f	v	å	û	ø	ı	ı	ı	ı	ı
-7	•	↕	'	7	G	W	g	w	ç	ú	ø	ı	ı	ı	ı	ı
-8	■	↑	(	8	H	X	h	x	ê	ÿ	ı	ı	ı	ı	ı	ı
-9	○	↓	)	9	I	Y	i	y	ë	Ö	ı	ı	ı	ı	ı	ı
-A	☉	→	•	:	J	Z	j	z	è	Ü	ı	ı	ı	ı	ı	ı
-B	♂	←	+	:	K	I	k	{	ï	ø	½	ı	ı	ı	ı	ı
-C	♀	└	.	<	L	\	l	|	î	£	¼	ı	ı	ı	ı	ı
-D	♪	↔	.	=	M	]	m	}	ı	Ø	ı	ı	ı	ı	ı	ı
-E	♫	▲	.	>	N	^	n	~	Ä	Pt	«	ı	ı	ı	ı	ı
-F	☼	▼	/	?	O	_	o	△	Ä	f	»	ı	ı	ı	ı	ı

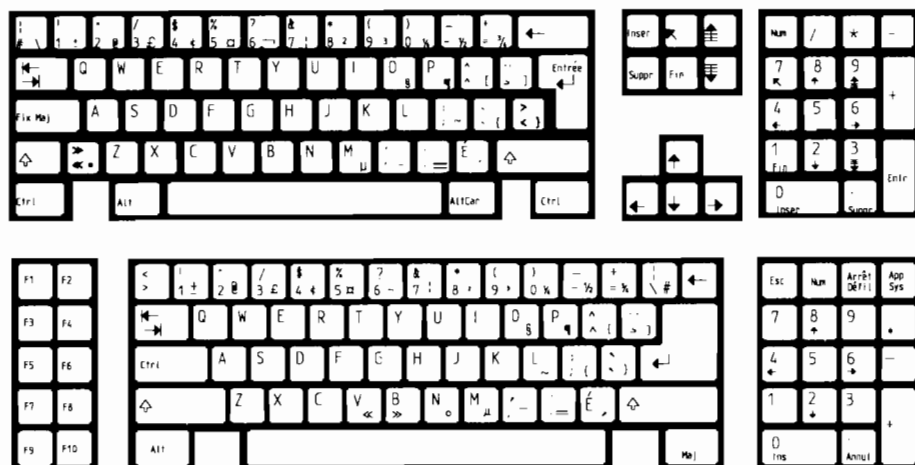
Keyboard Layouts

The keyboard layout tells your system which characters from the character set specified by your code-page setting correspond to which keystrokes. You can change keyboard layouts without changing code pages. MS OS/2 supports the following keyboard layouts:

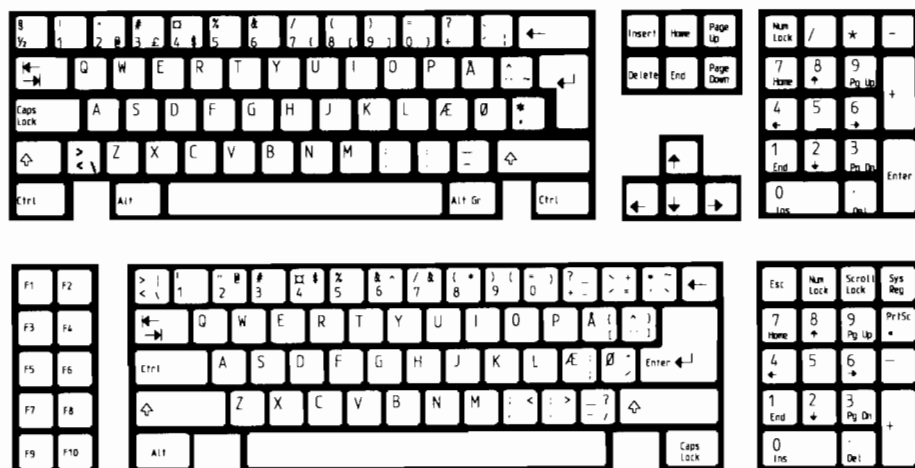
Belgium



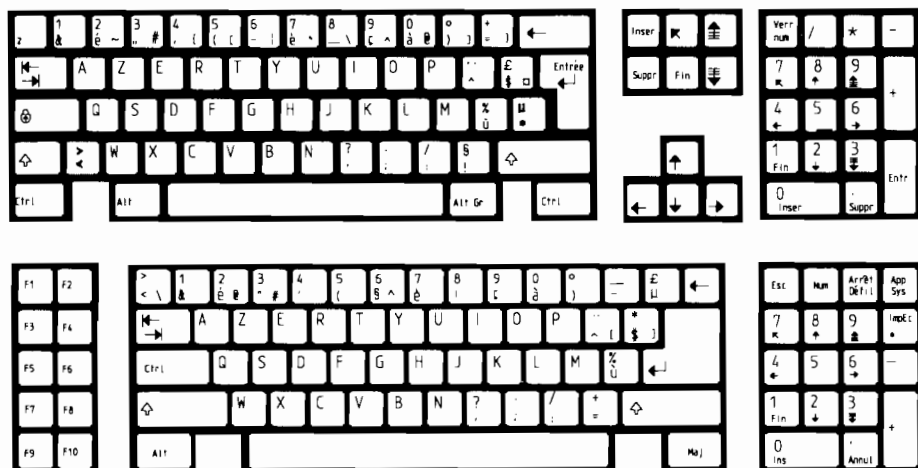
Canada



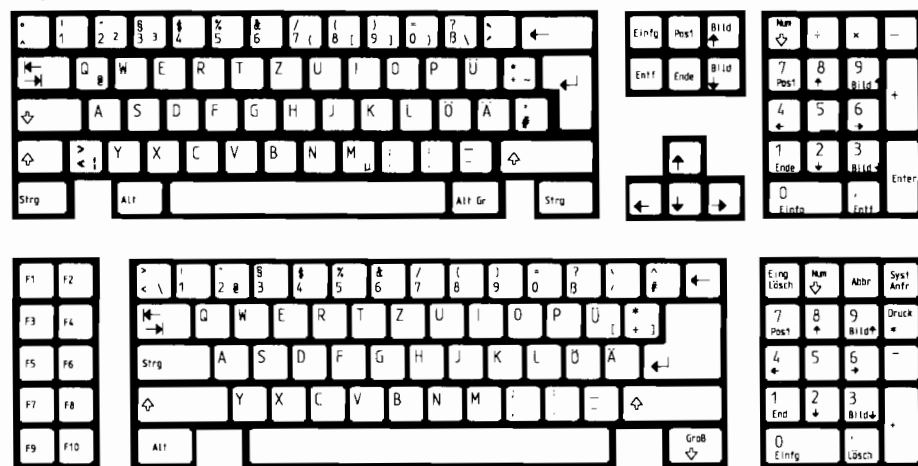
Denmark



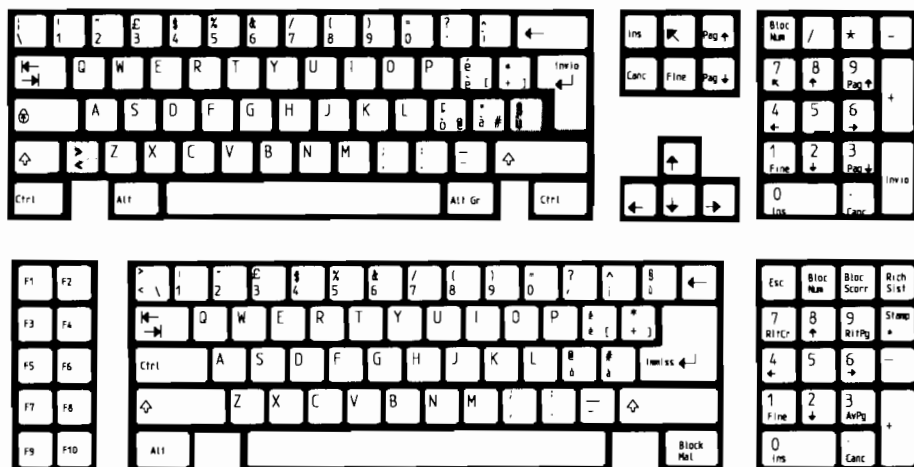
France



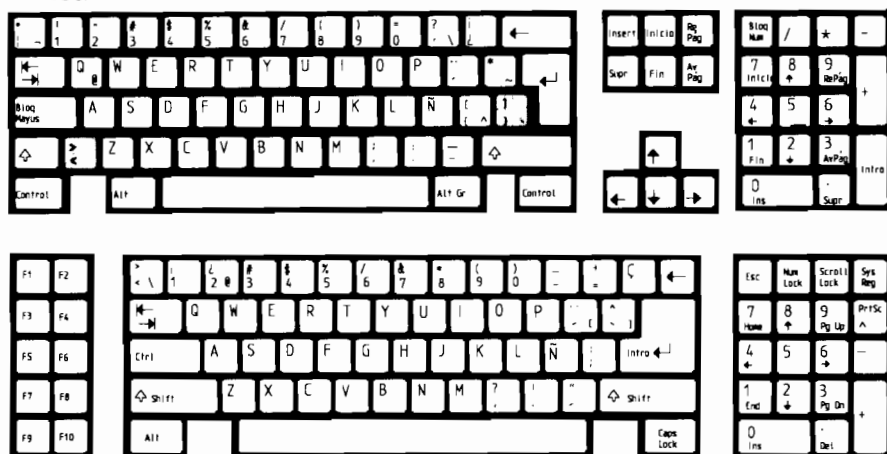
Germany



Italy



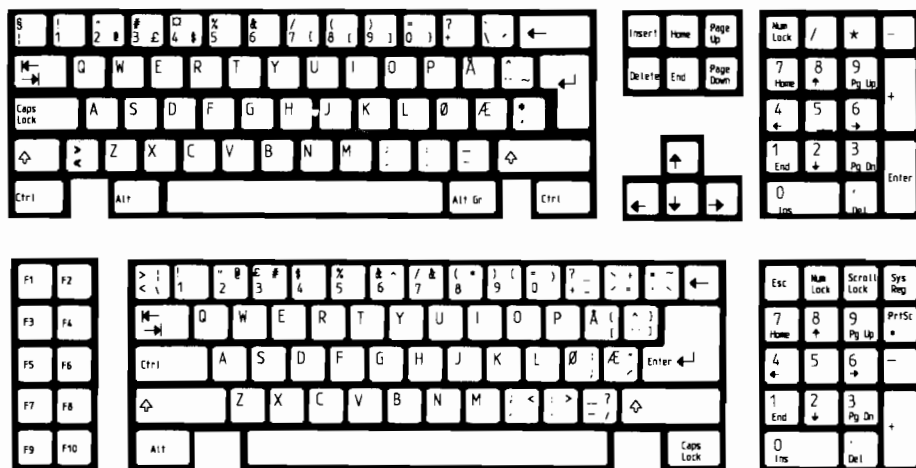
Latin America



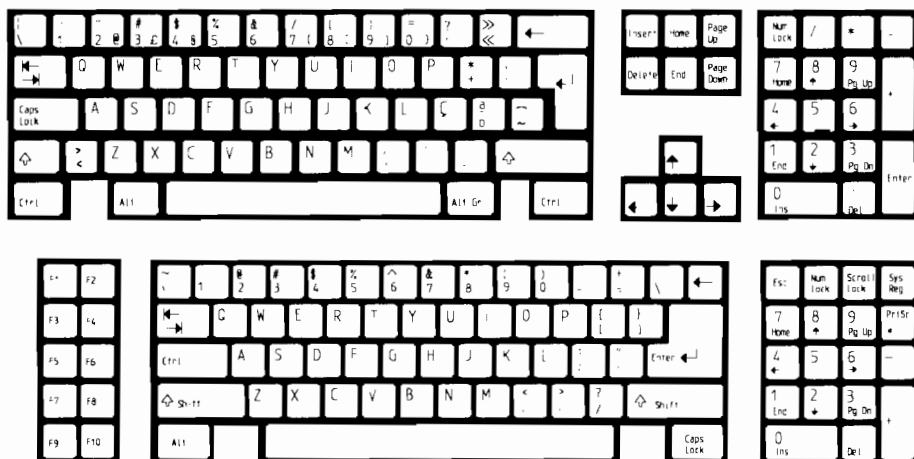
Netherlands



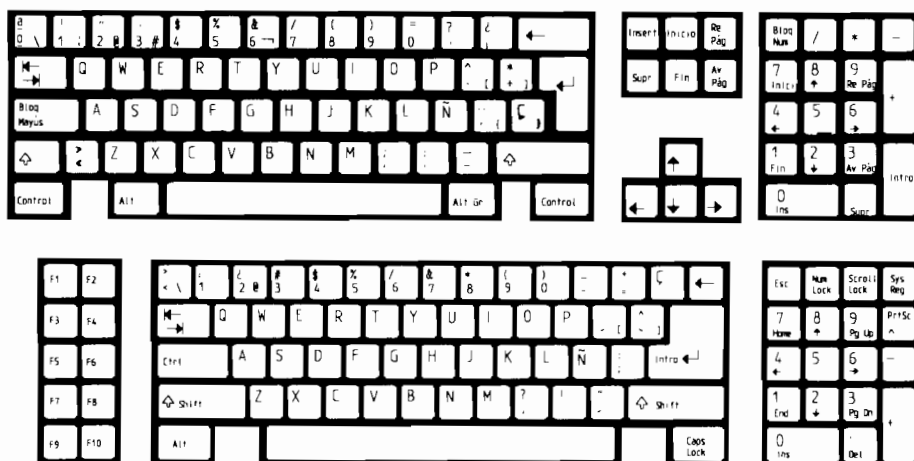
Norway



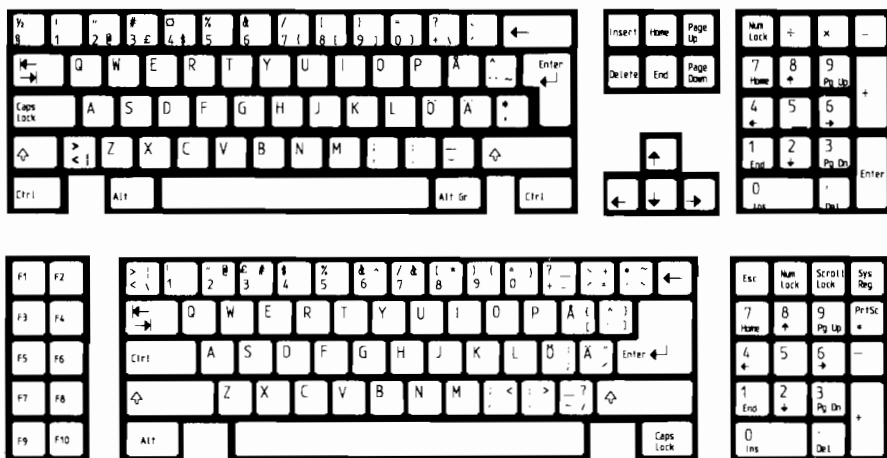
Portugal



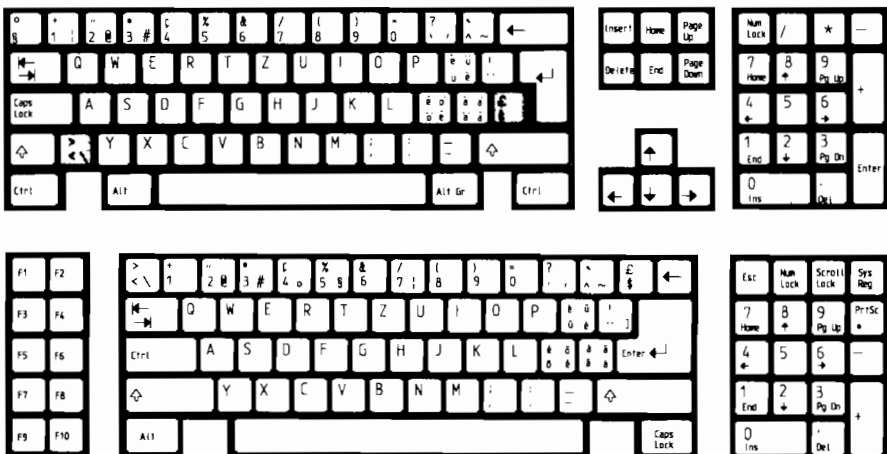
Spain



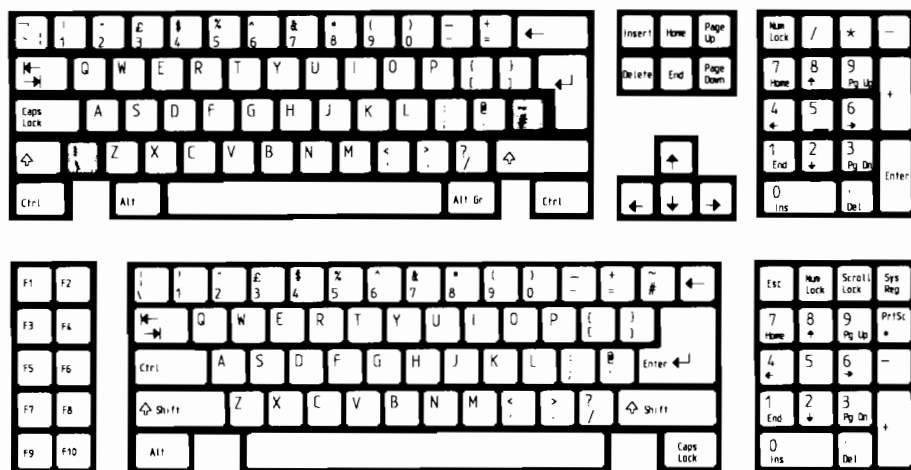
Sweden/Finland



Switzerland



United Kingdom



United States

